

JOURNAL  
OF  
SOUTH AFRICAN BOTANY  
VOL V.

---

CARL PETER THUNBERG.  
AN EARLY INVESTIGATOR OF CAPE BOTANY.

(With 1 Map.)

By MIA C. KARSTEN.

III.  
TRAVELS.

WITH SPECIAL REFERENCE TO THUNBERG'S SOJOURN AT THE CAPE AND  
HIS JOURNEYS INTO THE INTERIOR OF THE COLONY.

THUNBERG has recorded his impressions of travel in Europe, Africa and the far East in a four-volume work, published in different years. The original Swedish edition is entitled : *Resa uti Europa, Africa, Asia, förrättad Åren 1770-1779*. Upsala. 1 : a Del. 1788 ; 2 : a Del. 1789 ; 3 : e Del. 1791 ; 4 : e Del. 1793.

German, English and French translations, complete or fragmentary, soon followed the original edition, viz :

*Reise durch einen Theil von Europa, Afrika und Asien, hauptsächlich in Japan, in den Jahren 1770-1779*. Aus dem Schwed. von GROSSKURD. Berlin I, II, 1792-94.

*Reisen in Afrika und Asien, vorzüglich in Japan, während der Jahre 1772 : 1779* auszugsweise übersetzt von K. SPRENGEL. Berlin 1792.

*Travels in Europe, Africa and Asia*. I-IV. London 1794-95.

*Voyages de C. P. THUNBERG au Japon, par le Cap de Bonne-Espérance, des îles de la Sonde, etc.* Trad. par L. LANGLES et revus quant à la partie d'histoire naturelle par J. B. LAMARCK. I-IV. Paris 1796.

*Voyage en Afrique et en Asie, principalement au Japon, pendant les*

années 1770-1779, servant de suite au voyage de SPARRMAN. Paris 1794.

In the Library of the Royal Botanic Gardens at Kew we examined the English translation, 3rd edition, published in 1795-96.

The complete title of this book is as follows :

*Travels, in Europe, Africa and Asia, made between the years 1770 and 1779.* In four volumes. By CHARLES PETER THUNBERG, M.D. Knight of the Order of Vasa. Professor of Botany in the University of Upsal.

The work was printed for F. and C. Rivington, No. 62, St. Paul's Church-Yard ; and sold by W. Richardson, Cornhill, and T. Egerton, Whitehall [London].

The first volume of this 3rd edition came out in 1795, the other ones in the year after.

The four volumes, which we found in very good condition, provide most fascinating reading, since THUNBERG gives a lively and well-detailed account of his experiences and adventures on his long and laborious journeys, including numerous interesting items in the field of natural history.

Vols. I and II are of the greatest value in connection with Cape botany, the third volume may be eliminated as dealing with Japan only, while the fourth and last volume provides *i.a.* some remarkable data with regard to his visits to British scientists towards the end of his homeward journey.

Apart from many fragments of this remarkable book illustrating most clearly the important part THUNBERG had in the botanical exploration of the Cape Colony, we shall quote any other data which may be of interest in connection with this work. In other words, an anthology of "Travels" with special reference to Cape botany will be given here.

TRAVELS, Vol. I (1795). Containing a *Voyage to the Southern parts of Europe*, and to the *Cape of Good Hope in Africa*, in the years 1770, 1771, 1772, 1773.

A complete summary of the contents of this volume may be useful : Preface ; Journey to Denmark, 1770 ; Trip to Norway, 1770 ; Voyage to Holland, 1770 (Amsterdam, Leyden) ; Voyage to France, 1770 (Rouen) ; Paris, 1771 ; France, 1771 ; Amsterdam, 1771 ; The Texel, 1771 ; Voyage to the Cape, 1772 ; The Cape, 1772 ; Paarl, 1772 ; The Cape, 1772 ; A journey into Caffraria, 1772 ; Return from Caffraria, 1772 ; The Cape, 1773.

The volume is illustrated with 3 plates, a frontispiece representing Table Mountain, and two plates inserted at the back of the volume, respectively representing the "Marmota Africana" (a very curious picture of the great white Cape mole) and various arms and implements of the Hottentots.

In this volume we find revealed some interesting data with regard to the contact THUNBERG had with outstanding Dutch botanists during his stay in their country (of special importance in connection with the BURMAN correspondence !), and the previous history of his journey to Africa and the far East, *i.e.* the people who were connected with his mission into those far-off quarters of the globe.

On pp. 15-16 (Amsterdam, 1770) we read : " On the 5th [of October], towards evening, we arrived at the populous and splendid commercial city of *Amsterdam*, which extends along the shore in the form of a crescent. The harbour is crowded with an incredible number of ships. . . .

On the 9th of October, I visited the Professors, Mssrs. *Burmans*, who received me in a very friendly manner. In my daily visits to them, I had not only the pleasure of surveying their different and numerous collections in natural history, and the advantage of their valuable library, in which the late celebrated Linnaeus put the last hand to his *Bibliotheca Botanica*, but was likewise invited every day to their tables, and requested to examine and give names to a great number of unknown minerals, insects, and plants, particularly of the grass and moss kind.

Here were some exquisitely beautiful petrifications and corals ; and the Library, so far as it related to Medicine and Natural History, might be said to be quite complete. This rendered my stay at Amsterdam both agreeable and useful ; and notwithstanding the advanced season, I should not have hastened from thence, had I not been deprived of my little stock of clothes and books, which, in my opinion, were both unjustly and imprudently kept in quarantain. It could not but be imprudent, to suffer a ship suspected of infection, to enter a harbour crowded with ships, and the crew to frequent the towns freely for several days, and afterwards to send the ship and cargo back to Texel to perform quarantain. It appeared likewise to be unjust, when there were no symptoms of infection on board."

As a matter of fact, THUNBERG has been forced to sail for France at an early date because of his luggage ! The Swedish agent, Mr. BAILLERIE, did not succeed in getting a permit to have the luggage forwarded to THUNBERG at Amsterdam. " But all I could obtain was a permit to get them at passing the Texel, if I should chuse to take a passage for France. Thus I was obliged to change my route, and subjected to considerable inconvenience and expence."

About his visit to Leyden THUNBERG writes (p. 18) : " The first thing I did in the morning of the 16th of October, was to visit Professor *David Van Royen*, who showed me his collection of plants from the Cape of Good Hope, and another which had lately been sent him from Ceylon."

On October 18 (p. 21) THUNBERG walked from Leyden to The Hague

from where he left for Amsterdam by "trekschuit" (tow-boat). On p. 22 we read that while he was waiting at Amsterdam for a vessel to convey him to Rouen, he daily visited Prof. BURMAN,<sup>43</sup> and made use of his library and cabinet of natural history. THUNBERG informs us that he found in BURMAN'S library (pp. 23-24) . . . "various collections of dried plants, from the East and West Indies, and Africa, but especially those of HERMANNUS and OLDENLANDUS,<sup>44</sup> which were bound." Immediately after this we are informed of the primary cause of THUNBERG'S long journey, for he tells us: "And as I arranged and described several plants belonging to the most comprehensive genera, such as *Ixiae*, *Ericae*, *Aspalathus*, &c. Professor BURMAN mentioned, that he would procure me an opportunity of making a voyage either to Surinam, or the Cape of Good Hope, at the expence of the States. I testified my sense of his friendly offer in the best manner I was able, and told him I would gladly accept it."

Needless to say THUNBERG did not fail to visit the botanic garden during his stay at Amsterdam. On p. 25 we find a short notice about it: "The botanic-garden<sup>45</sup> is situated near the town, is large and elegant, and contains several large orangeries and hot-houses, and a great number

<sup>43</sup> Undoubtedly Prof. JAN BURMAN (BURMANNUS) is meant here.

<sup>44</sup> HENRIC. BERNH. OLDENLAND (or OLDENLANDUS) was a Danish physician and botanist and a pupil of Professor PAUL HERMANN (HERMANNUS) of the Leyden University.

LINNAEUS informs us about OLDENLAND in his "Flora Capensis" p. 4; 1759, that "he was the second Botanist who visited the Cape of Good Hope and collected plants there, and his Herbarium is now in the possession of Burmannus, professor at Amsterdam" (. . . "secundus fuit Botanicus qui ad Caput bonae spei accessit et plantas ibi conquisivit, ejus Herbarium jam possidet cl. Burmannus, Prof. Amstelodamensis.") At the same place HERMANN was mentioned by LINNAEUS as the first botanist who saw the flora of the Cape with his own eyes. ("Primus fuit Botanicus qui propriis oculis Capitis bonae spei plantas visitaret, sub itinere in Zeylanam insulam"). (See also the Journ. of S.A. Botany, July, 1939, p. 88.)

Under the governorship of SIMON VAN DER STEL (1679-1699) the Company's garden at the Cape was in turn in the charge of OLDENLAND and another botanist of the name of JAN HERTOOG (or HARTOG).

We learn from LINNAEUS that OLDENLAND'S and other Cape collections were brought to Uppsala for his inspection by N. L. BURMAN, whose "Florae Capensis Prodromus," appended to his "Flora Indica" (1768), contains many references to OLDENLAND'S herbarium.

OLDENLAND also sent plants to J. PETIVER, a London chemist, who is known as an author on plants, animals and minerals.

OLDENLAND died some time before 1699, the exact date being unknown.

The above information is taken from the Journal of the Linnean Society. Botany, Vol. XLV, 1920-22, "Some early Cape Botanists and Collectors," by JAMES BRITTEN.

<sup>45</sup> This is the old *Hortus Medicus*, the later *Hortus Botanicus* of the Amsterdam University. The garden, now situated nearly in the middle of the town, stands in high repute for its beautiful and well-grown collections of plants, especially of S. African succulents (just as in olden times!) and insectivorous plants.



of succulent plants, and other curious productions from the Cape. The great American aloe (*agave Americana*) was in full blossom, and shown every day for money."

After having visited Rouen and Paris, THUNBERG arrived at Amsterdam for the second time towards the end of 1771.

On pp. 66-67 he writes among other things: "Since the preceeding year, when I stayed a few weeks at Amsterdam, and passed many agreeable hours in Professor BURMANN's library and cabinet of natural history that gentleman had, during my stay at Paris, passed a great many encomiums on my knowledge in natural history, in the presence of some gentlemen at Amsterdam; and at the same time represented to them, how serviceable I should be to them, as lovers of curious exotic plants, if I could but have the opportunity of going, at their expence, to some of the northern parts of Asia, especially *Japan*, from whence we had no plants in Europe, although it was probable, that they would bear the climate as well as others lately brought hither in great numbers from North America.

These gentlemen,<sup>46</sup> who spared no expence for their fruit and pleasure-gardens, listened with pleasure to this proposal, and resolved to furnish me with the means and recommendations necessary for a voyage to Japan."

It was arranged that THUNBERG would sail for the Cape of Good Hope (the first halting-place on his journey) with a ship of the East-India Company, and on pp. 69-70 we read: "On the 10th of December, I had the honour of going with M. BEAUMONT the director, in the Company's yacht to the Texel,<sup>47</sup> where the ships, bound to different places in the East-Indies, lay ready, waiting only for the muster and a fair wind. I was amply provided with letters of recommendation to the Governor at the Cape, M. RYK TULBAGH, from M. RHEEDE VAN OUDSHORN, who, about Easter, was to go to the Cape in quality of Vice-Governor; and from the Burgomaster TEMMINK, as also from Professor BURMANN and his mother-in-law, to M. BERG, counsellor of police; and to M. NETHLING, secretary of the court of justice.

We did not reach the *Texel* before the next day."

Finally THUNBERG embarked on the "*Schoonzigt*," one of the vessels bound for the East Indies, and commanded by a Swedish captain, Mr. RONDECRANTZ from Sm<sup>o</sup>land.

<sup>46</sup> The names of these gentlemen we find recorded on p. 313 (Cape, 1773) of this vol.

<sup>47</sup> The Texel, the first and biggest of the Dutch Frisian islands (opposite the present naval base Den Helder).

On December 30, 1771, the ship sailed from the Texel with a favourable east wind that would hold for 24 hours.

The voyage to the Cape appeared to be rather prosperous, apart from an accident that might have put an untimely end to THUNBERG's life and consequently would have bereaved science of one of its brilliant practisers. In that case it would have been reserved to some other botanist to become the father of Cape botany!

Only 5 days after the ship had left the roads of Texel, on January 4, 1772, it happened (p. 79) that "among other dishes, there were served up at night, at the officers' table, some pancakes, for which the dominé or chaplain, as caterer, had given the flour out to the steward, and by mistake, or rather from gross stupidity, had taken almost one half of some white lead, which had been put into a pitcher, and set by in the cupboard, for the purpose of painting the ship; the extraordinary weight of which, however, did not excite any suspicion in him."

Curiously enough the cook did not notice at all that he had got the wrong stuff for the pancakes, and according to THUNBERG's description, they looked rather under-baked when they were served at supper! We will spare the reader the detailed description THUNBERG gives of the symptoms of poisoning manifested by himself, the officers and other people who had eaten those ill-dressed pancakes. Fortunately nobody died of it, but all suffered from the after-effects of the lead-poisoning till nearly the end of January.

Table Mountain came in sight on April 11, 1772, and on the 16th "we arrived safely in the road in Table Bay, dropt our anchor, fired our guns, and with mutual joy congratulated each other," as THUNBERG narrates on p. 98 of this volume. On the next page he continues: "In the road we found, among others, a Swedish ship, which had arrived but a short time before at this southernmost point of Africa, and had brought my friend, Professor SPARRMAN."<sup>48</sup> In Dr. C. A. BACKER's *Verklarend*

<sup>48</sup> ANDERS SPARRMAN, to whom we already referred in the chapter on the Thunbergian correspondence, was born at Tensta in Uppland in 1748, and died at Stockholm in 1820.

He was a medical candidate, but took a special interest in natural history.

From 1765-67 he made a journey to India and China. Though a rather young man for such an expedition, he had good results. However, on his return home he did not feel like becoming a botanist and he partly sold his Chinese collection. Later it happened that Captain C. G. EKEBERG offered him an opportunity to sail to the Cape of Good Hope. This induced him to study diligently natural history as well as to collect botanical and zoological objects, in order to have a perfect command of this science at the time he expected to come out to the Cape, viz. as a participator (together with Prof. FORSTER!) in Capt. COOK's second voyage round the world from 1772-75.

In 1775 he returned to the Cape Colony, which he peregrinated that year and the year after, and where he made large collections in the field of natural history.

Back in Sweden, he became a conservator of the Royal Academy of Science and was appointed Professor of natural history at Uppsala University in 1781.

Woordenboek, p. 540 (1936) we find erroneously stated that SPARRMAN travelled with THUNBERG to the Cape in 1772.

On the 17th of April THUNBERG went with the captain on shore and took a lodging at Mr. HENDRIK FEHRSEN's house.<sup>49</sup>

Now we have reached THUNBERG's narrative of his experiences at the Cape, 1772.

On pp. 99-100 we read among other things: "Being safely arrived at the *Cape of Good Hope*, my first care was to wait on the lieutenant-governor, Baron JOACHIM VON PLETTEMBERG, and the other gentlemen of the regency, to whom I was recommended, in order to deliver to them the letters I had brought with me. And as the respectable and universally-beloved veteran, Governor TULBAGH, had, in consequence of age and gout, on the 11th of August in the preceding year, exchanged this life for a better, I delivered the letters directed for him to Baron PLETTEMBERG, who received me with the greatest kindness, and promised to assist me in my design of travelling into the interior part of the country, during the term of my residence in that quarter of the globe."

About Cape Town THUNBERG tells us *i.a.* (p. 102): "The houses are all of brick, white-washed and one, seldom two, but very rarely three stories high, and covered in for the most part with flat roofs of brick-work, or a kind of grass indigenous to this country (*restio tectorum*)<sup>50</sup> laid upon very low framework. On account of the violence of the winds that prevail here, the roofs cannot be tiled over, nor raised higher.

As to his literary work, SPARRMAN has recorded Captain Cook's voyage to the Cape. The work, originally written in Swedish, went through a French and a German edition. The French edition of this notable itinerary, which came out in Paris in 1787, is entitled *Voyage du capitaine Cook au Cap de Bonne Esperance*. (Traduit de l'original suédois par M. LE TOURNEUR.) The German translation (by GROSSKURD), which is less known, was published in Berlin by G. FORSTER in 1784.

The name of this contemporary of THUNBERG is commemorated in the genus *Sparmannia*, L. fil. (Tiliaceae.)

Captain C. G. EKEBERG, above mentioned (1716-1784), at first studied medicine. But later on he changed his career, became a sailor and made no less than ten voyages to the Indies and China with ships of the Swedish East-India Company, first as a mate, finally as a captain. He brought home many important collections of natural curiosities and in 1761 his merits were recognised by his election as a member of the Academy of Science. In the Academy's proceedings many contributions by his hand are to be found. (Vide Dr. C. A. BACKER, *Verklarend Woordenboek*, p. 191 (1936).)

In EKEBERG's opinion THUNBERG was not properly paid in the Dutch service. (Vide P. J. BERGIUS' letter to Thunberg of November 6, 1774.)

Prof. SPARRMAN honoured him by naming a new S. African genus *Ekebergia* (Meliaceae).

<sup>49</sup> It is beyond doubt that Mr. HENDRIK FEHRSEN is one and the same person as "Myn Heer Ferse" to whom Prof. P. J. BERGIUS directed his letters to THUNBERG, when the latter was at the Cape. (Vide his letters of November 6, 1774, and December 25, 1775.)

<sup>50</sup> *Restio tectorum*, L. fil. = *Dovea tectorum*, Mast. (Restionaceae).

The house of the lieutenant-governor, and the company's warehouse, were the only houses that were three stories high." . . .

On pp. 105-106 we find some interesting information about one of his fellow-travellers on his first journey into Caffraria, whose name is well-known in connection with the botanical exploration of the Cape, viz. Mr. ANDREAS AUGE.<sup>51</sup> THUNBERG writes of him: . . . " Among others I visited M. Auge, the gardener, who has made many, and those very long, excursions into the interior part of the country, and has collected all the plants and insects, which the late Governor TULBAGH sent to Europe to LINNAEUS, and to the Professors BURMANN and VAN ROYEN. And as he still continued his journies yearly into the country, he sold to strangers, as well herbals as birds and insects. It was of him that M. GRUBB, the director of the bank in Sweden, purchased that fine collection of plants, which was afterwards presented to Professor BERGIUS, and so well described by this latter gentleman in his book of the *Plantae Capenses*. M. AUGE's knowledge of botany was not very considerable, nor did his collections in general extend much farther than to the great and the beautiful; but, in the mean time, we are almost solely indebted to him for all the discoveries which have been made since the days of *Hermannus, Oldenlandus, and Hartogius*, in this part of Africa."

<sup>51</sup> JOHANN ANDREAS AUGE (1711- c. 1805) was a gardener living at the Cape, of whom PETER MACOWAN has given a very interesting account in his "Personalia of Botanical Collectors at the Cape," read before the S. African Philosophical Society, July, 1886, and published in its Transactions, Vol. IV, pp. xxx-liii (1887).

AUGE collected a large herbarium which was ultimately acquired by Prof. JAN BURMAN at Amsterdam, but in the above paper we find stated that "other sets of exsiccata of smaller extent appear to have been prepared by him for sale or gift to distinguished visitors touching at the Cape on the homeward voyage." There is little doubt that the numerous specimens from AUGE in the Banksian Herbarium were derived from one of these smaller collections.

Since he knew the country well, AUGE was most useful to THUNBERG as a guide. He took part in an expedition towards the north of the country, organised by Governor TULBAGH in 1761, as mentioned by THUNBERG in vol. II of this work, p. 201. This expedition on which also BRINK, a land surveyor, and RYKVOELS, a surgeon, were sent out, had for its object to find out about a people far into the north of the country "who wore linen clothes, were of a yellow colour, and went in and out of the mountains there, near a large river," probably a settlement of Portuguese, about which the Governor had had a report. THUNBERG tells us that part of the company, which was very numerous, left the Cape on the 16th of July, while the rest joined them near Olifant's River. They proceeded on their journey till the 6th of December, when they had penetrated into the north of the country to 26 deg. 18 min. latitude. Then they returned and arrived at the Cape on the 27th of April, 1762, without having discovered the yellow race they had been told of. In addition to this, THUNBERG observes: "This is the longest journey ever at tempted by Europeans towards this side, where the country is very dry, deficient in water, and mountainous, and the roads sometimes very stony."

When AUGE acted as a guide on THUNBERG's first journey into Caffraria he had reached the venerable age of 61.

Though THUNBERG had no very high opinion of his botanical knowledge, as we have seen, AUGE's merits must not be underrated. THUNBERG showed his appreciation by naming after him the S. African genus *Augea* (Zygophyllaceae).



About the Company's garden, enlarged and improved by Commander SIMON VAN DER STEL, and of which a part still remains adjoining the Government Avenue with its fine oak trees THUNBERG writes (p. 114) : "The company's garden is always open to the public. It is nine hundred and ninety-six paces long, two hundred and sixty-one broad, and has forty-four quarters, which are separated from each other by hedges, consisting, for the most part, of oaks or bays (*laurus nobilis*), several yards in height. I observed here, that a *royena villosa*,<sup>52</sup> that grew beside one of these oaks, had fairly perforated one of its branches through the very trunk of the oak, in which it now grew like a parasitic plant. . . . In the menagerie were several rare and uncommon animals, and particularly great numbers of birds."

On p. 116 we find some interesting notes about the use of a few indigenous plants, viz. : "The seed-vessels of the silver-tree (*Protea argentea*)<sup>53</sup> serve for fuel; the *restio dichotomus*<sup>54</sup> (*besem riet*) for brooms.

Kukumakranka (*gethyllis*)<sup>55</sup> is the name given to the legumen or pod of a plant, that grew at this time among the sand-hills near the town, without either leaves or flowers. This pod was of the length of one's finger, somewhat wider at top than at bottom, had a pleasant smell, and was held in great esteem by the ladies. The smell of it resembled in some measure that of strawberries, and filled the whole room."

After having mentioned that on *Robben Island* a great quantity of shells are collected and made into lime for the Company's service (p. 117), THUNBERG gives evidence of some ignorance as to the geological formations of S. Africa, for he writes : "In the whole country there is no other lime to be found, nor any mountains containing either chalk or limestone." (Think for instance of the limestone formation of the Swartberg Range !)

Proceeding to Paarl, 1772, we read on pp. 121-122 : "In the beginning of July (this must be June, see below) I made a day's excursion to *Mount Paarl*, in company with Dr. *Le Sueur*, who was sent for to see a patient . . . . Dr. *Le Sueur* was a native of the Cape, but had studied in Holland, and taken his degrees at Groningen."

From pp. 128-9 (Paarl, 1772) some more notes on common species of Cape plants, especially on their use, may be quoted here, viz. : "The

<sup>52</sup> *Royena villosa*, L. (Ebenaceae).

<sup>53</sup> *Protea argentea*, L. = *Leucadendron argenteum*, R. Br.

<sup>54</sup> *Restio dichotomus*, Thunb. = *R. triticeus*, Rottb. ??

<sup>55</sup> Kukumakranka, *Gethyllis spiralis*, Thunb. But according to THUNBERG's statement about its habitat, there is some reason to believe the plant in question was the Sand-kukumakranka, *G. ciliaris*, Thunb. (Amaryllidaceae).

leaves of the *Calla Aethiopica*,<sup>56</sup> a plant which grew even in the ditches about the gardens near the Cape, were said to serve for food for the (*yzervarken*) or porcupines.

The *geranium cucullatum*,<sup>57</sup> a fragrant plant, was used as an emollient, inclosed in small bags. . . .

The Hottentots eat the fruit of the *brabeium stellatum*,<sup>58</sup> a large shrub that grows near brooks and rivulets, called *wilde castanien* (wild chesnuts), and sometimes used by the country people instead of coffee : the outside rind being taken off, the fruit is steeped in water to deprive it of its bitterness ; it is then boiled, roasted, and ground like coffee."

On p. 134 (The Cape, 1772) THUNBERG narrates : " On the 30th of June I visited *Paradise*, and other farms belonging to the company, and situated below *Table Mountain*. *Rondebosch* is a villa belonging to the governor. On this eastern side, along *Table Mountain*, the south-east wind does not blow so hard as at the Cape, for which reason also both trees and shrubs grow here. Among other trees, the pine (*pinus sylvestris*<sup>59</sup>) was conspicuous by its elegant crown. Wild vines (*wilde druyven*, *vitis vitiginea*<sup>60</sup>) made a distinguished figure at this time with their red berries, which resembled cherries, and were eatable."

In the meantime THUNBERG was planning a journey into the interior of the Colony, and about a month after his trip to Paarl the necessary preparations were made for such an expedition which was by no means a light matter in those days.

On pp. 140-141 (The Cape, 1772) we read : " In the month of August the winter drew near to its end, and the fields began to be decorated with flowers ; it therefore now became necessary for me to think of such preparations as would be useful and requisite for me in my approaching long journey into the interior part of the country, a journey, relative to which a promise had been given me, that I should make it, in a great measure, at the company's expence.

I therefore provided myself with necessary clothes, as well as with boxes and bags, for collecting roots and seeds, with boxes and pins for insects, a keg of arrack for preserving serpents and amphibious animals, cotton and boxes for stuffing and keeping birds in, cartridge-paper for the

<sup>56</sup> *Calla Aethiopica*, L. = *Zantedeschia aethiopica*, Spreng.

<sup>57</sup> *Geranium cucullatum*, L. = *Pelargonium cucullatum*, Soland.

<sup>58</sup> *Brabeium stellatum*, Thunb. = *B. stellatifolium*, L.

<sup>59</sup> This is not *Pinus sylvestris*, L., the Scotch Pine, but very likely *P. Pineae*, L., the Stone Pine from the Mediterranean regions, with its most conspicuous umbrella-like crown.

<sup>60</sup> Probably *Vitis capensis*, Burm. is meant here, *V. vitiginea*, Thunb. = *V. repanda*, Wight et Arn.) being a Ceylon species.

drying of plants, tea and biscuits for my own use, and tobacco to distribute among the Hottentots, together with fire arms, and a large quantity of powder, ball, and shot of various kinds. Shoes for the space of four months were no inconsiderable article in this account, as the leather prepared in the Indies is by no means strong; besides that it is quite cut to pieces, or soon worn out, by the sharp stones that occur every where in the mountains.

My equipage consisted of a saddle horse, a cart covered with sail-cloth, like an ammunition-waggon, and three yoke of oxen, by which it was to be drawn through the whole of the journey. My travelling companions were AUGE, the gardener, who had before made eighteen journeys of different lengths into the country, and was now to be my sure and faithful guide; M. IMMELMAN, a youth, the son of a lieutenant in the army, together with LEONHARDI, a serjeant, who undertook this tedious journey for the sake of shooting the larger animals and birds; and, lastly, two domesticated Hottentots, one of whom was to drive, and the other to lead our oxen."

In order to retrace exactly the route THUNBERG followed on his three journeys into the interior of the Colony, as described in "Travels," the consultation of a detailed map of this part of Southern Africa was imperative, and we are greatly indebted to the "Nederlandsch Zuid-Afrikaansche Vereeniging" at Amsterdam, for the loan of sheets 6 and 9, representing the Cape Province, of the Topographical Map of the Union of South Africa.<sup>61</sup> A thorough examination of this splendid map revealed most of the mountains, rivers, valleys, etc., we found recorded in "Travels." So we got a complete idea of the stretches THUNBERG covered on his peregrinations in the interior of the Colony and the coastal regions.

We must point out, especially to the non-S. African reader, that when examining the map of S. Africa, one will come across several rivers, mountains and valleys of the same name. So there are two Olifants Rivers in the Cape Province, of which the bigger one rises from the Witzenberg north of Tulbagh and flows into the Atlantic north of Lamberts Bay, while the other one rises from the Couga Mountains, takes its course through the Oudtshoorn valley and finally runs into the Gamka River; two Keurbooms Rivers (one near Swellendam and the other and bigger one flowing into Plettenberg Bay); several Doorn Rivers, of which the Doorn R., which rises from the Bokkeveld Karoo and empties itself

<sup>61</sup> Topographical Map of the Union of South Africa (Topografiese Kaart van die Unie van Suid Afrika). Printed and published in the Union of S. Africa by the Government Printer. Pretoria 1937.

into Olifants R., and the Doorn R. and Great Doorn R., which both derive their source from the Outeniqua Mountains south of Oudtshoorn and unite with the other Olifants R. (one of the tributaries of the Gamka) may be mentioned here. Further there are several Salt Rivers and Palmiet Rivers, more than one Elands Kloof, several Paardebergen and Swartbergen, etc., etc.

Many of the localities as recorded in "Travels" show an incorrect or ancient spelling. We will give the names of the mountains, rivers, valleys, etc., as we found them marked on the map we used, with the names as recorded by THUNBERG following in brackets.

THUNBERG'S FIRST JOURNEY INTO CAFFRARIA (SEPTEMBER 1772-JANUARY, 1773).

A summary of the route covered by him and his party on this long and successful journey which yielded many botanical discoveries may be given first.

The little caravan set out from the Cape on September 7. They first drove in the northward direction to *Saldanha Bay* (Saldahna B.) and *Great Berg River* or Groote Berg-Rivier; they ferried over the river and turned south-east: on the right side of the river *Riebeeck Kasteel* (Riebeck-Castle), "a high and large solitary mountain" (p. 152) was seen, to the left *Piquetberg* (Picket-berg). After having passed by the *Honingberg* and crossed the *Twenty Four Rivers* (Four and twenty river), they came to Kleinberg River (or little Mountain-river), and passed through Roodezands-kloof, and from there to *Roode Zand*.

According to THUNBERG *Roode Zand* is a valley, terminated to the northward by the high *Winterhoek Mountain* which divides it from Olifantskloof, and to the southward by the *Mostertshoek* (Vol. II, p. 31). East of Roode Zand arises the *Witzenberg* to which mountain THUNBERG made an excursion. On the topographical map this valley has not been marked, but we traced the Roode Zand Mountains, which enclose the valley on the west. Roode Zand must be at a little distance from Tulbagh.

Then they crossed *Hex River*, pursued their journey to *Keurbooms River* and finally arrived at *Swellendam*, whence they turned to the east, went across the *Buffeljagts River* and arrived at a farm of the Company named Riet Valley, in the vicinity of *Grootvadersbosch*.

*Grootvadersbosch* is a temperate rain forest on the southern slopes of the *Langeberg*, not far from Swellendam and Heidelberg, C.P. In the days of THUNBERG this wood covered a greater area than now-a-days.





Map showing THUNBERG's journeys into the interior of the Cape Colony.

By the Author.

Journal of S.A. Botany. (To face p. 116.)



On the sketch-map of the part of the Cape THUNBERG travelled over, on p. 2 of JUEL'S *Plantae Thunbergianae* (1918) Grootvadersbosch has been marked too far eastwards, viz. in the close vicinity of *Gouritz River* (by which name one designates the lower course of the Gamka after its confluence with the Olifants R.).

Having passed over *Krakous River* and *Krakous Height* (Hoogte), they arrived at *Palmit River*, three localities we failed to trace on the above-mentioned map. Then they crossed *Soetmelkrivier* (Zoet-melks Rivier) in the Riversdale Division and visited a farm near *Valsch River*, a tributary of *Gouritz River*. They crossed the latter and passed by the *Attaquas* and *Outeniqua* (Hautniquas) *Mountains*, which they finally traversed in a northerly direction, in order to get to the *Langekloof*.

Having left the Hottentots behind with the oxen, THUNBERG and his two European companions made a round on horseback "through the verdant and woody country of the *Hautniquas*, which extended quite to the sea-shore." In this coastal area they passed by *Little* and *Great Brak Rivers*, crossed *Kaaimans River* (Quaimans Drift) and some more small streams emptying into the sea, i.e. the *Knysna* (Neisena) and *Koukuma Rivers*. Finally they arrived near the *Diep River* (Deep R.), a small tributary of *Keurbooms River*, and visited the *Robberg* (Robbeberg) near the sea-shore at *Plettenberg Bay*.

Then they proceeded up *Keurbooms River* to *Jackals Kraal* (Jackall's kraal) south of *Langekloof Mts.* and finally passed to *Langekloof* valley. From this valley they proceeded to *Kromme River* (which empties itself into St. Francis Bay) and came to the *Essenbosch* between *Diep River* and *Kromme River*. They penetrated as far eastwards as the mouth of *Gamtoos River*.

On December 6 they returned and crossed *Keurbooms River*. Then they came to *Doorn River* (Dorn rivier) and afterwards to *Great Doorn River* (Groote Dorn River) (both rising from the *Outeniqua Mountains* and confluent with *Olifants River*), keeping always to the right and leaving *Attaquas Kloof* to the left. They arrived again at *Riet Valley* and paid another visit to *Grootvadersbosch*. Proceeding on their journey they crossed *Brede River* and *Zonder End River* (Rivier Zonder end) and reached within three days the warm bath of "Zwarte Berg," which we identified as the *Swarthberg*, near Caledon.

Later on passing by *Little Houwhoek*, they went over *Great Houwhoek* and *Hottentots Holland Kloof*. Then they reached the *Hottentots Holland Mountains*, which they crossed.

After having traversed the sandy plains at the other side of the mountains, they finally arrived again at Cape Town.

## I. From the Cape to Saldanha Bay and Great Berg River.

After having left the Cape on September 7, they proceeded the same day to Jan Besis Kraal,<sup>62</sup> a small grazing farm of the Company and situated near the sea-side. About the country they traversed on their way to this place, THUNBERG informs us (p. 143): "All over the sandy fields the *protea hypophylla*<sup>63</sup> was seen creeping and procumbent, with its leaves standing up erect on each side of it. Near *Eland's Fountain* (or Elk's Fountain) a plant of this species was seen standing upright like a brush, much resembling the former, but with broader leaves."

On p. 144 he continues: ". . . . "The sandy and low plains, we traversed, abounded at this time in bulbous plants, besides others which were now sprung up in consequence of the heavy rains that had fallen during the winter, and which with their infinitely varied flowers decorated these other wise naked heaths." On the same page he narrates: "The roots (*bulbi*) of the *iris edulis*,<sup>64</sup> when boiled and served up at table, tasted much like potatoes. . . . The African flowers vary greatly as to colour, especially on the upper part, and are more constant on the under part." A little further we come across an interesting notice about Cape birdlife, viz.: "Flamingoes (*Phaenicopterus ruber*) were seen in abundance, wading every where in the ponds and puddles, in which were found also ducks and snipes (*scolopax capensis*)."

On p. 145 we read that the seed-vessels of a species of *Euphorbia*, pulverised, were used for poisoning wolves (Jackals?).

As to the botanical features of the country near Saldanha Bay, mention is made of one bulbous plant only (p. 146): "The *albuca major*<sup>65</sup> grew in this neighbourhood tall, straight, and elegant. Its succulent stalk, which is rather mucilaginous, is chewed by the Hottentots and other travellers, by way of quenching their thirst."

From Saldanha Bay they returned to Thee Fountain (p. 147); of the local vegetation of this area two plants are brought to our notice. On p. 148 we read: "Great complaints were made of the seedvessels of the *rumex spinosus* (dubelties),<sup>66</sup> which grew very common here, as the sharp prickles of them cut the feet of the slaves and others, who walked barefooted.

<sup>62</sup> Jan Besis Kraal = Jan Biesjes Kraal, now Milnerton.

<sup>63</sup> *Protea hypophylla*, Thunb. = *Leucospermum hypophyllum*, R. Br. The upright form with broader leaves Thunberg talks about may be a distinct species.

<sup>64</sup> *Iris edulis*, L.f. = *Moraea edulis*, Ker. (Irid.).

<sup>65</sup> *Albuca major*, L. (Liliaceae).

<sup>66</sup> *Rumex spinosus* Thunb. = *Emex australis*, Steinh. (Polygonaceae).



"In wet years, the *pharnaceum mollugo* (muggekruid)<sup>67</sup> grows copiously here, and is said to make the cattle, that feed on it, very fat."

In the veld between Thee Fountain and Great Berg River they noticed a shrub bearing black berries, named Kraijebosch<sup>68</sup> by the colonists, since the crows feed on these fruits (p. 149).

## II. From Great Brak River to Swellendam and Grootvadersbosch by way of Roode Zand.

About September 26 they arrived at Roode Zand, a farm inhabited by "DE VETT,<sup>69</sup> a descendant of one of the French families which came with the first colonists that settled in this part of Africa, to lay out vineyards and plant fruit-trees," as THUNBERG informs us (p. 153). During his stay at Roode Zand—THUNBERG took his lodgings with the farm people—a good deal of botanizing was done in this valley (between the high Winterhoek Mountains and the Mostertshoek), which is likely to have been named after the farm, and in the mountains near-by. We already know that THUNBERG made an excursion to the Witzenberg.

Among the plants indigenous in this region which caught THUNBERG's attention, were the Chinchinchees, *Ornithogalum thyrsoides*, Jacq., of which he writes (p. 153): "Tintirinties is a name given to a species with a white flower, from the sound it produced, when two stalks of it were rubbed against each other."

A little farther (pp. 156-157) he gives an enumeration of some more plants growing wild at Roode Zand apart from one cultivated species, with special reference to their use, viz.: "The *tulbaghia alliacea* (*wilde knofflook*, or wild garlic),<sup>70</sup> the root of which smells very strong of garlic, was reported to be a charm for serpents.

"With the poison of serpents and the juice of the *sideroxylon toxiferum* (*gift-boom*, or poison-tree)<sup>71</sup> the Hottentots poison their arrows, which they use against antelopes and wild buffaloes, as also against their enemies. . . .

. . . . The *aponogeton distachyon* (*waater uynties*, or *water lilies*)<sup>72</sup> grew in many places, in shallow puddles of water, very plentifully, and

<sup>67</sup> *Pharnaceum mollugo*, L. = *Mollugo oppositifolia*, L. (Choripetalae).

<sup>68</sup> Kraijebosch (Crow Bush): perhaps a *Royena*.

<sup>69</sup> De Vett, wrong spelling of DE WET.

<sup>70</sup> *Tulbaghia alliacea*, L.f. (Liliaceae).

<sup>71</sup> *Sideroxylon toxiferum*, Thunb., syn. *Cestrum venenatum*, Thunb. = *Acokanthera venenata* (Thunb.) G. Don. (Apocynaceae).

<sup>72</sup> *Aponogeton distachyon*, L.f. (Aponogetonaceae).

from its white flowers that floated on the water, exhaled a most fragrant odour. The roots roasted were reckoned a great delicacy.

*Cucumbers*, which were cultivated in the gardens, were served up at table, by way of desert, being pickled first in salt water, and afterwards in vinegar, with Cayenne pepper.

From a decoction of the *solanum nigrum* (or deadly night-shade)<sup>73</sup> and the *sonchus oleraceus* (or sow-thistle),<sup>74</sup> which were found growing wild near almost every farm-house, were formed, with wax and lard, some excellent salves, for healing of wounds and ulcers of all kinds, remedies which were as common as they were approved."

Then we come across an absorbing narrative of one of the most exciting botanical experiences THUNBERG had at the Cape (pp. 157-159) which we will quote here in full :

"A report that was very general at Roode-Zand, struck me with the greatest astonishment, and excited my curiosity in the highest degree. The inhabitants all assured me with one voice, that there was a bush to be found on the mountains on which grew various wonderful products, such as caps, gloves, worsted stockings, &c. of a substance resembling a fine plush. I importuned almost every body in the neighbourhood to procure me, if possible, some of these marvellous products, and I resolved not to leave the place till I should have unriddled this mystery. In the course of a few days, I had several of the leaves brought me down from the mountains, which were covered with a very thick shag or down (*tomentum*) and very much resembled white velvet. The girls, who were used to the management of these leaves, began immediately, with singular dexterity and nicety, to strip off this downy coat, whole and entire as it was, without rending it. After it had been taken off in this manner it was turned inside outwards ; when the green veins of the leaf appeared on one side. Accordingly, as the leaf was more or less round or oval, divers of the above-mentioned articles were formed out of it, the shape being now and then assisted a little by the scissar. The stalks of the leaves furnished stockings and ladies' fingered gloves ; the smaller leaves, caps. So that the matter was not quite so wonderful, as it was wonderfully related. But in the mean time it remained still for me to find out to what plant these leaves belonged, and this forced me to climb up myself the highest summits of the mountains, where they grow. The plant, indeed, was not scarce in those places but it cost me a great deal of trouble before I could find one in flower, or in seed, and when I did, I was convinced that this plant belongs to the genus of *bupleurum bup-*

<sup>73</sup> *Solanum nigrum*, L., a herb of world-wide distribution.

<sup>74</sup> *Sonchus oleraceus*, L. (Compositae).

*leurum giganteum*.<sup>75</sup> The downy coat, resembling fine wool, being well dried, was also used for tinder, and answered the purpose extremely well."

They stayed at Roode Zand for 10 days, for on p. 159 we read: "On the 6th of October having made here a fine collection of plants, birds, and seeds, and our cattle being perfectly refreshed, we left this beautiful spot."

They proceeded on their journey in south-eastern direction. On p. 163 mention is made of a species of *Mesembryanthemum* very common near *Hot-bath* (presumably Brand Vlei): "The *mesembryanthemum edule*<sup>76</sup> grew here in abundance, and especially in the sandy plains, and was called Hottentots figs (*Hottentots vygen*), the fruit when ripe and peeled, tasting tolerably well; it varies greatly in the colour of its blossoms, which are sometimes red; at other times carnation, yellow, or white."

On October 9 they passed over Maurice's Heights to Koorie,<sup>77</sup> and here THUNBERG got a glimpse of what is now called the Robertson Karoo, of which he writes (p. 163): "On the other side of this eminence were seen also the *Carrow Plains*, which are very dry, steril, and bare of grass, being covered with a great number of succulent plants only, and bushes.

The prickly bush of the *arduina bispinosa*<sup>78</sup> now bore ripe berries, which were said to be eaten by the Hottentots."

On pp. 164-165 THUNBERG gives some more notes on plants belonging to the vegetation of the Karoo and adjacent regions: "The *zygophyllum morskana*,<sup>79</sup> a handsome shrub, now adorned the hills with its blossoms, and appeared to be very proper for arbours."

The *kraals* they passed on their track they found "inclosed by felled trees, consisting of the *mimosa nilotica*<sup>80</sup> and *arduina bispinosa*, the most prickly of any almost in all Africa. . . . The *mimosa nilotica*, while it is cutting down, may sometimes happen to fall upon a man, and its prickles to enter deep into his body, on which occasion they may chance to break off, and stick fast in it."

On October 14 they proceeded to Riet Fontein, passed over Klaasvoogds River (CLAS VOGT's *Rivier*), which is to be found between Robertson and Ashton. It is a rather small river which derives its source from the Langeberg and empties into the Breede River. Of the plants

<sup>75</sup> *Bupleurum giganteum* (L.f.) Thunb. = *Hermas gigantea*, L.f. (Umbelliferae).

<sup>76</sup> *Mesembryanthemum edule*, L. (syn. *Carpobrotus edulis*, N.E. Br.).

<sup>77</sup> Maurice's Heights (or Maurits Hoogte) may be the present Mowers, where there is a low pass and a railway siding. Goree is a few miles west of Robertson.

<sup>78</sup> *Arduina bispinosa*, L. = *Carissa arduina*, Lam. (Apocynaceae).

<sup>79</sup> *Zygophyllum morskana*, L. (Zygophyllaceae).

<sup>80</sup> *Mimosa nilotica*, Thunb. = *Acacia Karoo*, Hayne, (Legum.).

THUNBERG found growing wild in this area, two species are quoted. On pp. 166-167 we read :

"The *viscum capense*,<sup>81</sup> a parasitic plant, was seen disseminated every where on the branches of trees (especially of the *rhus*) by means of its berries, which the birds are fond of. . . .

. . . . The branches of the wax-shrub (*myrica cordifolia*),<sup>82</sup> the berries of which are covered with a fat substance resembling bees-wax, were put whole into a pot of boiling water, in order to melt and skim off the wax. It resembles grey impure wax, is harder than tallow, and somewhat softer than wax. The farmers use it for candles, but the Hottentots eat it like a piece of bread, either with or without meat."

On October 17, passing by Bruyntjes River and Leeuwe River, they came to Keurbooms River (near Swellendam !), "which is so named from the trees (*sophora capensis*)<sup>83</sup> which grow near it in abundance," as Thunberg tells us on p. 167. And on the same page we find recorded the following interesting observations :

"An infusion of the root of *asclepias undulata*<sup>84</sup> was used as a remedy for the colic. . . .

. . . . The acrid berries of the *fagara capensis*<sup>85</sup> were used both here and other parts of the country in the colic."

Having crossed a broad river, viz. *Buffeljagts River* (which rises from the Langeberg and unites with Breede River), they arrived at a farm known as Riet Valley. "Not far from this farm of the Company's," as THUNBERG narrates on p. 169, "which particularly furnishes it with large timber, in a cleft in the mountains, stood a large wood, called *Grootvader's Bosch*, or Grandfather's Wood. . . . The forest was very thick and lofty, but unfortunately the trees at this season [the second half of October, M.K.] had neither blossom nor fruit on them, to satisfy my curiosity."

On the same page we find some notes on three kinds of wood the colonists used for cabinet work, yielded by this forest, viz. :

"*Camassie-hout*<sup>86</sup> was a very fine sort of wood, used for the borders of chests of drawers, and of other pieces of furniture.

<sup>81</sup> *Viscum capense*, L. (Loranthaceae).

<sup>82</sup> *Myrica cordifolia*, L. (Myricaceae).

<sup>83</sup> *Sophora capensis*, L. (the Keurboom) = *Virgilia capensis*, Lam. (Leguminosae).

<sup>84</sup> *Asclepias undulata*, L. = *Xysmalobium undulatum*, R. Br. (Asclep.).

<sup>85</sup> *Fagara capensis*, Thunb. = *Bursera capensis*, (Thunb.) Ind. kew. (Rutaceae).

<sup>86</sup> Camassie-wood = *Gonioma Kamassi*, E. Mey. (Apocynaceae).



*Stink-hout* (stink-wood),<sup>87</sup> which resembles the walnut-tree, and is used for making writing-desks and chests of drawers.

*Geel-hout*, or yellow wood (*Ilex crocea*)<sup>88</sup> is a large tree, the wood of which is very heavy, more or less of a pale yellow colour, and is used for making tables."

On the next page the following records are of interest in connection with our subject: "A species of pepper (*Piper capense*)<sup>89</sup> that was found in abundance in the wood here, was called by the country people *staart pepper* (or tail-pepper) and was used by them as a spice." And proceeding to the natives, the author informs us that their bodies were powdered with a powder of *bucku* (*diosma*).<sup>90</sup>

### III. From Grootvadersbosch to Langekloof and Gamtoos River by way of Outeniqualand.

From Grootvadersbosch they pursued their journey in an easterly direction. They got to the plains near *Vet River* (Vett Rivier), where . . . "the aloe-tree (*Aloe perfoliata*)<sup>91</sup> from the leaves of which the gum aloe distils, grew in greater abundance than I ever observed it to do in any other place," as THUNBERG informs us (p. 171). At the same place we find recorded that the sheep were feeding here on various poisonous plants, "such as the *Rhus lucidum*,<sup>92</sup> *Lycium afrum*,<sup>93</sup> &c."

Then they came to *Attaquas kloof* (between Herbertsdale and Mossel Bay?) and of the plants THUNBERG observed in this area, two species are brought to our notice, with special reference to their use, viz.:

"The wood of the olive-tree (*Olea capensis*),<sup>94</sup> which was white and very heavy, served to make chairs of." (p. 172). The leaves of the

<sup>87</sup> Stinkwood = *Ocotea bullata*, E. Mey. (Lauraceae).

<sup>88</sup> *Ilex crocea*, Thunb. = *Elaeodendron croceum*, DC. (Celastraceae). This is the "saffraanhout" tree, the true "geelhout" (yellow wood) being *Podocarpus Thunbergii*, Hook. (Taxaceae).

<sup>89</sup> *Piper capense*, L. fil. (Piperaceae).

<sup>90</sup> *Buchu* is still gathered wild in the Cape, and consists of the dried leaves of many Rutaceae, including some species of *Barosma*. The Buchu plant referred to by Thunberg was very likely *Diosma crenata*, L. = *Barosma crenulata*, Hook.

<sup>91</sup> *Aloe perfoliata*, L.; Thunberg Diss. Aloe 1785. This is presumably *Aloe ferox* Mill.

<sup>92</sup> *Rhus lucidum*, L. (Anacardiaceae).

<sup>93</sup> *Lycium afrum*, L. (Solanaceae).

<sup>94</sup> *Olea capensis*, L. (Oleaceae).

*Atragene vesicatoria*<sup>95</sup> were used by the country people in this and other places instead of *cantharides*” (pp. 174-5).

Later on they passed by Little and Great Brak River and came to Zout-fontein. From there they proceeded to Keerom River and of the plants he found growing wild near-by THUNBERG mentions the *Anthyllis*,<sup>96</sup> without giving a specific name. On p. 176 he writes: “Of the bark of the *Anthyllis*, the Hottentots have the art of making ropes, by means of which they ascend trees, as by a ladder, when they want to get honey out of them.” A few pages further (p. 181) we are informed of the fact that the spear of the Hottentots is made of the *Assagay wood* (*Curtisia faginea*).<sup>97</sup>

On pp. 184-185 THUNBERG gives a detailed and thrilling narrative of the accident referred to in P. J. BERGIUS’ letter of December 14, 1788,<sup>98</sup> which caused the death of both the sergeant’s horses.

This story, from which it is learned that THUNBERG himself had a narrow escape, may be quoted below with exception of some expatiations which render it unnecessarily long and which for that reason can well be omitted.

On the preceding page we find more information about the route followed by THUNBERG and his party, from which we may conclude that the unhappy meeting with the outrageous buffalo (there was but one buffalo, in contradiction of the statement in BERGIUS’ letter) took place in the woody country of the Knysna district and very likely on the southern slope of the Outeniqua Mountains. For THUNBERG writes: “At the dawn of day, on the 3d of November, we set out again on our journey, and crossed several rivers, such as the *Krakadou*, *Ao*, *Koukuma* and *Neisena*. The woods we passed through were narrow and full of prickly bushes. . . . AUGE, the gardener, having travelled this way before, was now our guide, and we had left the Hottentots with our oxen behind us. In the afternoon we arrived at *Koukuma Rivier*. We forded over one of its branches, and intended to pass through a thicket to a farm which we discovered on an eminence (p. 184) on the other side of this thicket, belonging to one HELGERT MULLER;”

Now we come to the story of their nasty experience with a wild Cape buffalo: . . . . “but we had not advanced far into the wood before we had the misfortune of meeting with a large old male buffalo, which was

<sup>95</sup> *Atragene vesicatoria* = *Knowltonia vesicatoria*, (L.f.) Sims. (Ranunculaceae).

<sup>96</sup> *Anthyllis*. (Not identified.)

<sup>97</sup> *Curtisia faginea*, Ait., the “Assagay Hout.” (Cornaceae).

<sup>98</sup> Vide Journal of S. African Botany, Vol. V, July, 1939, Carl Peter Thunberg, etc. II, p. 101.

lying down quite alone, in a spot that was free from bushes, for the space of a few square yards. He no sooner discovered AUGE, who went first, then roaring horribly he rushed upon him. The gardener turning his horse short round, behind a large tree, by that means got in some measure out of the buffalo's sight, which now rushed straight forwards towards the serjeant, who followed next, and gored his horse in the belly in such a terrible manner, that it fell on its back that instant. . . . The gardener and the serjeant in the mean time had climbed up into trees, where they thought themselves secure. The buffalo after this first achievement, now appeared to take his course towards the side where we were approaching, and therefore could not have failed in his way to pay his compliments to me, who all the while was walking towards him, and in the narrow pass formed by the boughs and branches of trees, and on account of the rustling noise these made against my saddle and baggage, had neither (p. 185) seen nor heard anything of what had passed. As in my way I frequently stopped to take up plants, and put them into my handkerchief, I generally kept behind my companions, that I might not hinder their progress, so that I was now at a small distance behind them.

The serjeant had brought two horses with him for his journey. One of them had already been dispatched, and the other now stood just in the way of the buffalo, who was going out of the wood. As soon as the buffalo saw this second horse, he became more outrageous than before." In brief it may be mentioned that the buffalo also killed this horse in a most ferocious manner. After his detailed description of the horse's death THUNBERG continues: "Just at the moment that he was thus occupied with this latter horse, I came up to the opening, where the wood was so thick, that I had neither room to turn my horse round, nor to get on one side. I was therefore obliged to abandon him to his fate, and take refuge in a tolerably high tree, up which I climbed.

The buffalo having finished this his second exploit, suddenly turned round, and shaped his course the same way which we had intended to take."

Then THUNBERG looked around for his companions, and seeing not a vestige of them, nor hearing them, he started to shout after them. And it is not without a touch of irony, when he writes (p. 186): . . . , "I discovered these magnanimous heroes sitting fast, like two cats, on the trunk of a tree, with their guns on their backs, loaded with fine shot, and unable to utter a single word." Moreover THUNBERG informs us that AUGE the gardener was so strongly affected, that he could scarcely speak for some days after!

After having crossed the Pisang River, one of the small coastal rivers emptying into Plettenberg Bay, they arrived at the seashore. THUNBERG

narrates that the adjacent mountains were covered with shrubs and bushes of various kinds, particularly with the *Arduina bispinosa*, in such measure that in several places they were impenetrable.

As one of the most important botanical features of the coastal areas of the south-eastern Cape Province may be mentioned the *Strelitzia augusta*, Thunb., a plant belonging to the family of the Musaceae, which the early colonists mistook for a wild banana; to its occurrence in the vicinity of Pisang River this river owes its name. THUNBERG came across this plant with its attractive flowers of most singular shape (hence the common name "Bird-of-Paradise Flower" given to this and allied species), when he visited Robberg near Plettenberg Bay. On pp. 191-2 he writes about it: "The *Strelitzia*, with its yellow flowers and blue *nectarium*, grew near this spot, and was one of the most beautiful plants, of which the bulbs were procured to send to Europe. The Hottentots were said to eat the fruit of it."

Though THUNBERG does not give the specific name, there is no doubt about the identity of this species, considering the locality. Since the *Strelitzia* is not a bulbous plant, the "bulbs" THUNBERG talks of, must be the more or less fleshy rhizomes. Moreover, he was wrong in his description of the colour of the flowers, which applies to *S. Reginae*, not to *S. augusta*.

Then they rode on to Diep River, Leeuwebosch River (Leuwe bosch rivier) and so to Seekoe River. In this area the very characteristic and decorative *Encephalartos* forms part of the landscape. We know that THUNBERG originally included this Cycad (under the generic name of *Zamia*) and the Japanese *Cycas revoluta*, Thunb. among the Palmae. His information about this plant, its occurrence and use, is full of interest, viz.: . . . . "The Bread-tree (*Zamia caffra*)<sup>99</sup> is a species of palm, which grows on the hills, below the mountains, in these tracts. It was of the height and thickness of a man at most, very much spread, and single. I have sometimes seen from one root, two or three stems spring. It is out of the pith (*medulla*) of this tree, that the Hottentots contrive to prepare their bread. For this purpose, after scooping out the pith, they bury it in the earth, and leave it there for the space of two months to rot, after which they knead it, and make it into a cake, which, in their usual slovenly and filthy manner, they slightly bake in the embers. I

<sup>99</sup> Described in 1775 as *Cycas caffra*, nova Palmae species descripta (in Nova Acta Regiae Societatis scientiarum Upsaliensis, vol. II Tab. V) and in 1782 under the name *Zamia caffra*, Thunb. (in an article entitled "Beschrijving van twee nieuwe soorten van Palmboomachtige Gewassen, uit Japan en van de Kaap der Goede Hope;," (Verhandelingen Hollandsche Maatschappij der Wetenschappen, Haarlem, Vol. XX: 2.

Much later this plant was named *Encephalartos caffer*. (Thunb.) Miq.



observed that the tree stood in dry sterile places, between stones, and grew slowly."

On next page THUNBERG writes about the country they were passing : " The ridge of mountains, which at *Roode zand* we had on our left hand, and afterwards in *Lange kloof* on the right, and which were continued quite from *Witsenberg*, now terminated here before it reached the sea-shore ; whereas the ridges on our left hand were continued farther, and had the *Carrow plains* behind them."

It is quite evident THUNBERG had reached now more arid regions, because of the following representatives of the native vegetation he brings to our notice : " The berries of the *Guarri bush* (*Euclea undulata*)<sup>100</sup> had a sweet taste, and were eaten by the Hottentots. Bruised and fermented, they yield a vinegar, like that of Pontac.

The *Crassula tetragona*,<sup>101</sup> as being somewhat of an astringent nature, boiled in milk, in the quantity of a handful, is used as a remedy for the diarrhoea."

On p. 207 the medical use of one of the indigenous Leguminosae is mentioned : " The beans of the *Guajacum afrum*,<sup>102</sup> though a poisonous shrub, are boiled and eaten by the Hottentots."

#### IV. Return from Caffraria.

After having crossed Keurbooms River, they came to Kamanassie Land (Camenassie Land). Here THUNBERG observed in the veld a most remarkable fungous plant, of which he writes (p. 211) : " The *Lycoperdon carcinomale*<sup>103</sup> grew here on the ant-hills, the brown powder of which was said to be used in cancers."

<sup>100</sup> *Euclea undulata*, Thunb. (Ebenaceae), one of the typical Karoo shrubs, with hard, leathery leaves. The *Guarri* grows to a height of 6-10 feet.

<sup>101</sup> *Crassula tetragona*, L.

<sup>102</sup> *Guajacum afrum* (L.?), syn. *Schotia afra*, (L.) Thunb. = *Schotia speciosa*, Jacq. (Legum.).

<sup>103</sup> An essay by P. A. VAN DER BYL, M.A., D.Sc., on " The Fungous Flora of the Western Province of the Cape," in *Botanical Features of the South-Western Cape Province* (published on the occasion of the visit to South Africa of the British Association for the Advancement of Science, July, 1929) provides some additional information about the fungus THUNBERG noticed on the ant-hills. With regard to its place in the vegetable system, we find that it is a fungous plant belonging to the class of the Gasteromycetes and the family of Podaxaceae. VAN DER BYL writes about it : . . . " mention should be made of *Podaxon carcinomalis*, the so-called " kraaisnuif," which grows only on termite heaps and is of historic interest for it was described by LINNAEUS as early as 1781 from a collection by THUNBERG, the father of South African Botany."

It is beyond doubt that *Podaxon carcinomalis* and *Lycoperdon carcinomale* (wrongly spelled as *Lycyperdon*) are one and the same species.

On the same page THUNBERG narrates: "On the 13th (of December) we crossed the barren *Carrow plain*. . . . The sheep here ate the tender leaves of the *Mimosa nilotica*.<sup>104</sup> . . . A *Mesembryanthemum*, with a white flower, was chewed by the Hottentots, for the purpose of quenching their thirst, after it had been suffered to putrefy, and been properly prepared."

On p. 213 some records are given about THUNBERG's second visit to Grootvadersbosch: "I hoped now to find several trees in blossom; but the season was not yet far enough advanced [about the middle of December, M.K.].

The *Calodendron*,<sup>105</sup> however, was then in blossom, the honeyed juice of which I perceived beautiful butterflies sucking, without my being able to reach either the one or the other. But by the help of my gun, which I loaded with small shot, and fired in among the trees, I got some branches with blossoms on them."

After having crossed Breede River, and Zonder End River, they proceeded along the latter river, and came to another post of the Company's, Zoete melk's valley. Of the plants they came across in this part of the country, two species are mentioned (pp. 214-215), viz.: "*Psoralea pinnata* (*Pinnwortel*)<sup>106</sup> was a plant, of which the country people in many places complained, as being the worst weed in the gardens, on account of the roots striking deep and firm in the ground, and consequently being difficult to eradicate. . . . Wild chesnuts (*Brabejum stellatum*)<sup>107</sup> are so eagerly devoured by the wild boars, that they seldom or ever leave one on the ground to spring up, unless it should chance to fall between stones."

After descending the Hottentots Holland Mountains the little caravan kept New Year's day 1773, of which THUNBERG writes on p. 218: . . . . "and, together with almost all the inhabitants of the neighbourhood, (we) went down to the sea-side to pass the whole day

The name *Lycoperdon* is applied to a distinct group of species, belonging to the same class of fungi; with some allied genera the gen. *Lycoperdon* forms the family of Lycoperdaceae.

*P. carcinomalis* must have a wide distribution, considering that it occurs in the south-western Cape Province as well as in the south-eastern part of the country where THUNBERG has found same.

<sup>104</sup> *Mimosa nilotica*, Thunb. = *Acacia Karoo*, Hayne.

<sup>105</sup> = *Calodendron capense*, (L.f.) Thunb. (Rutaceae). By some authors, *i.a.* by JUEL in his "Plantae Thunbergianae," the name of this genus is spelled *Calodendrum*.

<sup>106</sup> *Psoralea pinnata*, L. (Leguminosae).

<sup>107</sup> *Brabejum stellatum*, Thunb. = *Brabejum stellatifolium*, L. (Proteaceae).

in mirth and pleasure." (This was presumably at the present Somerset Strand.)

In addition to this he tells us that they found here, thrown up by the surge, the "*Trumpet-grass*" (*Fucus buccinalis*)<sup>108</sup> in which they (the country people who spent the day with him) blew like a trumpet."

Finally, having spent a whole day in crossing the very level and extensive sandy plain (the Cape Flats) that lies between the Hottentots Holland Mountains and the Cape, THUNBERG and his party arrived at Cape Town on January 2, 1773.

#### THE CAPE, 1773.

On p. 219 THUNBERG begins a description of an excursion to the summit of *Table Mountain* he made in the company of M. SONNERAT, a Frenchman, introduced by him as "an excellent draughtsman who had accompanied M. COMMERÇON in that capacity in his extensive travels round the world."

THUNBERG made acquaintance with M. SONNERAT at the house of M. BERG, Secretary of the Police, where he stayed together with the Frenchman for a few weeks "for the sake of botanizing, and of shooting a great number of beautiful Cape birds for the cabinets of the curious in Europe."

They undertook their excursion to Table Mountain in the middle of January. They set out at three o'clock in the morning, at a little after eight they reached its summit, where it was moderately and agreeably cool, as THUNBERG informs us.

About their botanical experiences on this mountain-trip THUNBERG gives the following narrative (pp. 219-221):

"We were also recompensed for our trouble by a great number of rare plants, especially of the *Orchideae*, as they are called, which I never afterwards could meet with either here at other seasons, or indeed at all in any other mountain. Among these the *Orchis grandiflora*,<sup>109</sup> or *Disa uniflora* (Bergii *Plantae Capenses*) was conspicuous by its beautiful flowers; of the *Serapias tabularis*<sup>110</sup> we found only one specimen; the *Serapias melaleuca*<sup>111</sup> was distinguished by its black and white flowers,

<sup>108</sup> This plant, a very common sea-weed, and one of the larger thalloid forms, was later named *Ecklonia buccinalis*. It is known under the common name of sea-bamboo.

<sup>109</sup> *Disa uniflora*, Berg. (Orchid).

<sup>110</sup> *Serapias tabularis*, (L.f.) Thunb., syn. *Cymbidium tabulare*, (L.f.) Sw. = *Eulophia tabularis*, (L.f.) Bolus.

<sup>111</sup> *Serapias melaleuca*, Thunb. = *Disa melaleuca*, (Thunb.) Sw.

the most uncommon in nature ; and with great difficulty, and at the hazard of my life, I got for the first and last time the blue *Disa longicornis*,<sup>112</sup> which is as beautiful, as it is singular in its form. This last plant grew in one spot only, on a steep rock, and so high up, that in order to come at it after we had clambered up the side of the rock as high as we could, I was obliged to get upon the shoulders of *M. Sonnerat*, when, with a long stick, I beat down five of these plants, the only specimens that were then in bloom. *M. SONNERAT*, who before had not had an opportunity of collecting as many plants at the foot of the mountain as I had, made in this one day only, a collection of 300 different species ; but was so singularly unfortunate, though he had brought with him three pair of shoes for this excursion, as to return bare-footed," (thanks to "the sharp angular stones which are rolled down from the mountain and lie both at its foot and in the clefts through which the road goes, which tear the soles and the upper-leathers.").

So much for the climbing of Table Mountain.

The next fifty pages are interspersed with stray notes concerning the vegetation of the Cape and the adjacent country. These notes, which yield a wealth of interesting information and are of a most varied character, may be quoted here successively according to the pages.

Pp. 243-244 : "Round the hills near the Cape grew the *Cliffortia ruscifolia*,<sup>113</sup> and the *Borbonia lanceolata*,<sup>114</sup> much resembling juniper trees, and like the *Polygala Heisteria*,<sup>115</sup> with their sharp leaves pricking the foot passengers ; while the *Asparagus Capensis*,<sup>116</sup> with its recurved thorns, tore their clothes and retarded their passage, for which reason it has received from the inhabitants the name of *Wakt en beetje*, Stop a bit.

The *Tulbaghia aliacea* (Wilde knoflook, or Wild garlic)<sup>117</sup> which grew both in the sands near the Cape and in other places in the country, was used in hectic fevers, either boiled in water or in some kind of soup."

Page 249 : "Near *Muysenberg* (or Mouse mountain) the wax-shrubs (*Myrica quercifolia* and *cordifolia*)<sup>118</sup> grew in abundance along the shore.

<sup>112</sup> *Disa longicornis*, Thun. = *Disa longicornu*, L.f.

<sup>113</sup> *Cliffortia ruscifolia*, L. (Rosaceae).

<sup>114</sup> *Borbonia lanceolata*, L. (Leguminosae).

<sup>115</sup> *Polygala Heisteria*, L. = *Muraltia Heisteria*, (L.) DC. (Polygalaceae).

<sup>116</sup> *Asparagus capensis*, L. (Liliaceae).

<sup>117</sup> *Tulbaghia alliacea*, L. (Liliaceae).

<sup>118</sup> *Myrica quercifolia*, L.; *M. cordifolia*, L. (Myricaceae).



The berries of them are quite round, full of knobs, soft, and of the size of a pea. The berries themselves are quite black, but covered with a farina of a whitish-grey colour. They are gathered in their ripe state in the month of March, and boiled in water till all the white powder is melted off, and floats on the surface of the water like fat; this, when skimmed off and cooled, grows hard, almost like wax, and is of a greenish-grey or ash colour. The farmers use it for candles, when they get any quantity of it, and the Hottentots eat it like so much cheese."

Near *North Hoek* (Noord Hoek), which they reached when crossing the mountains from Hout Bay, also bushes of the wax-shrub, *Myrica cordifolia*, were found, as Thunberg informs us on p. 267. They grew there on the dunes, which consisted all of loose sand, raised into hills of various heights. These bushes were frequently found growing on the hills themselves in a low and creeping habit.

Passing on to p. 285 we read: "The baboons of Table Mountain, besides paying frequent visits to, and plundering the gardens of the Europeans, feed also upon the pulpeous bulbs of several plants, which, after digging up, they peel and eat. . . . The *Gladiolus plicatus*<sup>119</sup> appears to be the most favourite plant with those that live near the Cape, for which reason also this plant is known by the name of the *Baboon*."

Page 286: "The great white African Mole (*Marmota Africana*), the size of which is nearly equal to that of a cat, feeds on several sorts of bulbous roots that grow in these sandy plains in abundance, especially *Gladioluses*, *Ixias*, *Antholyzas*, and *Irises*.<sup>120</sup> . . .

. . . . The *Moraea undulata*<sup>121</sup> never opens before nine o'clock in the morning, and before sun-set, at four in the afternoon, it closes again.

The *Ixia cinnamomea*<sup>122</sup> (*Avondbloem*, *Canelbloem*) opens every evening at four, and exhales its agreeable odours through the whole night.

The approach of rain is announced by the flowers of various bulbous plants, such as the *Ixias*, *Moraeas*, *Irises*, and *Galaxias*, the tender flowers of which do not open in the morning, if (p. 287) rain is to be expected soon; and if a shower is to fall in the afternoon, they close some time before.

Several of these likewise diffuse an agreeable fragrance, particularly at evening or night, somewhat like the odour of pinks, but fainter

<sup>119</sup> *Gladiolus plicatus*, Thunb. Diss. Glad. 1784 = *Babiana plicata* Ker, known as the *Baviaantje*.

<sup>120</sup> *Irises* = various species of *Moraea*.

<sup>121</sup> *Moraea undulata* (L.) Thunb. = *Ferraria undulata*, L. (Iridaceae).

<sup>122</sup> *Ixia cinnamomea*, L.f. = *Hesperantha cinnamomea* (L.f.) Ker. (Irid.).

such are the *Gladiolus tristis* and *recurvus*, the *Ixia pilosa*, *falcata*, and *cinnamomea*.<sup>123</sup>

The *Earth-rose* (Aard-roos) was the name by which the inhabitants both of the town and country distinguished the *Hyobanche sanguinea*,<sup>124</sup> a plant with a low deep-red flower, which is scarcely of a finger's length, and has neither branches nor leaves. It grows in winter and spring in the low sandy plains, both near the town and elsewhere towards the sea-shore, pushing only its cluster of blood-red flowers above the ground. The *Antholyza ringens*,<sup>125</sup> with its gaping flower, and the ever-varying *Gladiolus plicatus*,<sup>126</sup> which decorate these sandy plains in abundance, have their pulposus bulbs deep down in the sand, and do not raise their flowers much higher than the *Hyobanche* above the surface of the ground.

During the winter months, three beautiful species of *Gardenia* were blowing in the company's garden. The *Gardenia florida*<sup>127</sup> was probably brought hither from the Indies; at least in my travels in this southernmost angle of Africa, I never perceived (p. 288) it growing wild anywhere, but always planted in the gardens, and that even among the colonists far up in the country. . . . The *Gardenia Rothmannia*,<sup>128</sup> which has less conspicuous flowers than the former, and of which both the flowers and fruit, on being dried, always turn black. The *Gardenia Thunbergia*,<sup>129</sup> with respect to its bloom, is one of the finest trees in the world. This little tree had been brought a few years before from the forests of the country, where it is scarce and grows very slowly, the wood being at the same time so hard that on this account it is used for clubs. This tree, after it has once begun to blossom, continues to blow for several months, producing fresh blossoms every day, as fast as the old ones by degrees fade and droop, and at length fall off. The blossom is almost six inches long, white and thick, like the most beautiful wash-leather, of an agreeable odour, and does not lose its white colour. . . .

<sup>123</sup> *Gladiolus tristis*, L.; *Gladiolus recurvus*, Thunb. = *Hesperantha radiata* (Jacq.) Ker.; *Ixia pilosa*, L.f. = *Hesperantha pilosa* (L.f.) Ker.; *Ixia falcata*, L.f. = *Hesperantha falcata* (L.f.) Ker.; *Ixia cinnamomea*, L.f. (vide footnote No. 122).

<sup>124</sup> *Hyobanche sanguinea*, L. (Scrophulariaceae), a parasitic plant, growing on the roots of *Lycium* &c.

<sup>125</sup> *Antholyza ringens*, L. (Iridaceae).

<sup>126</sup> *Gladiolus plicatus*, Thunb. Diss. Glad. 1784. = *Babiana plicata* Ker.

<sup>127</sup> *Gardenia florida*, L. = *G. jasminoides*, Ell., a species native from Japan. (Rubiaceae).

<sup>128</sup> *Gardenia Rothmannia*, Thunb., a species indigenous to the Cape.

<sup>129</sup> *Gardenia Thunbergia*, Thunb. (Cape).

. . . . The wood that is used for dressing their victuals in the kitchen is nothing but brushwood (p. 289), being got with no less pains than expence from the smaller trees and bushes."

THUNBERG, after having made some enquiry concerning this matter, found that the following were the most commonly employed for this purpose: the stems and roots of the *Protea grandiflora*, *conocarpa*, *speciosa*, *hirta*, *mellifera*, and *argentea*,<sup>130</sup> a few species of *Erica*, and some sorts of *Brunia*.

On p. 289 and following pages the medical use of various Cape plants has been recorded.

Pp. 289-290: "Many *Gerania*,<sup>131</sup> with their red and pulpos roots, grew in the sandy plains near the town; and as these roots are of an astringent nature, the country people used them in the diarrhoea and dysentery.

The root of the *Bryonia Africana*<sup>132</sup> was employed both as an emetic and a purge.

The roots of the *Asclepias undulata* (Bitterwortel) and *Crispa*,<sup>133</sup> as well as the whole of the herb *Eriocephalus*,<sup>134</sup> were used for the purpose of expelling urine in the dropsy.

For the same purpose also they frequently made use of the root of the *Haemanthus coccineus*,<sup>135</sup> instead of squills, or the *Scilla maritima*.<sup>136</sup> The plant is very common on the hills below the mountains, and hence has obtained the name of the *Mountain-squill*. Its root is large, white, mucilaginous, fibrous, and somewhat acrid. After being cut into slices it is steeped in vinegar, and from this is made a kind of weak *Oxymel scilliticum*, which is used in dropsies and asthmas.

The *Polygonum barbatum*,<sup>137</sup> which grows in ditches, and is of an acrid nature, is, like its kindred species, used for dropsical and swelled legs.

<sup>130</sup> *Protea grandiflora*, Thunb.; *Protea conocarpa*, Thunb. = *Leucospermum conocarpum*, (Thunb.); *Protea speciosa*, L.; *Protea hirta*, L. = *Mimetus hirta*, (L.) Knight; *Protea mellifera*, Thunb. (the so-called "Suikerbos"); *Protea argentea*, L. = *Leucadendron argenteum*, (L.) R. Br.

<sup>131</sup> *Gerania* = various species of *Pelargonium*.

<sup>132</sup> *Bryonia africana*, Thunb. = *Kedrostis nana*, Cogn. (Cucurbitaceae).

<sup>133</sup> *Asclepias undulata*, L. = *Xysmalobium* (L.) R. Br.; *Asclepias crispa*, Berg. = *Gomphocarpus crispus*, (Berg.) R.Br. (Asclep.).

<sup>134</sup> *Eriocephalus*, L., a genus belonging to the Compositae.

<sup>135</sup> *Haemanthus coccineus*, L. (Amaryll.).

<sup>136</sup> The "Mountain-squill" cannot be identical with *Scilla maritima*, L. = *Urginea maritima*, Baker, which is a Mediterranean species. The plant THUNBERG speaks of may be *Urginea altissima*, Baker.

<sup>137</sup> *Polygonum barbatum*, L. Introduced from Japan.

A decoction of the leaves of the *Crotalaria perfoliata*<sup>138</sup> was esteemed a powerful diuretic, and in consequence of this property, to cure dropsies."

Pp. 291-292: "The *Adonis Capensis*<sup>139</sup> and *Atragene vesicatoria* (*Brandblad*)<sup>140</sup> used instead of *Cantharides*: these plants grew on the sides of the mountains and hills and were exhibited in the sciatica and rheumatism.

The *Adiantum Aethiopicum* (*Vrouwehaar*),<sup>141</sup> a species of maidenhair, grew chiefly on the sides of the *Devil's mountain*,<sup>142</sup> and was drank as tea, in colds and other affections of the breast.

The *Protea mellifera* (*Tulp-boom* and *Zuyker-boom*) contains in its calyx a sweet juice, which, when inspissated, was used in disorders of the breast.

Further, we read on p. 292: "The *Salicornia fruticosa* (*Zee koral*, or sea coral)<sup>143</sup> grew on the sea-shore, and notwithstanding its brackish taste, was eaten by the soldiers and some few others as a sallad, dressed with oil and vinegar."

On next page THUNBERG informs us that "from the *Oxalis cernua* (*wilde Syring*),<sup>144</sup> which grew to the greatest size and in the greatest abundance of all the species appertaining to this genus, was prepared a good and serviceable *Sal acetocellae* (or salt of wood-sorrel)."

This series of short notes may be ended with the following record—non-medical—which we found on p. 310:

"The *Galena Africana*<sup>145</sup> was known under the appellation of *Kraalbosch*, and in some places was used for fences about the inclosures for their cattle, when no other bushes fit for the purpose were to be had."

Although this first journey into the interior of the Colony had very good scientific results, and the party had returned safe and sound to Capetown after their long and tedious expedition, on which great fatigues had to be endured and dangers to be overcome, bad luck and severe trouble were not spared THUNBERG, as is learned from the following quotations from pp. 313-315:

<sup>138</sup> *Crotalaria perfoliata*. Probably *Rafnia perfoliata*, E. Mey. (Leguminosae)

<sup>139</sup> *Adonis capensis*, Thunb. = *Knowltonia gracilis*, DC. (Ranunculaceae).

<sup>140</sup> *Atragene vesicatoria* = *Knowltonia vesicatoria*, (L.f.) Sims.

<sup>141</sup> *Adiantum aethiopicum*, L. (Filices).

<sup>142</sup> Devil's mountain = Devil's Peak, a lesser peak of Table Mountain.

<sup>143</sup> *Salicornia fruticosa*, L. (Chenopodiaceae).

<sup>144</sup> *Oxalis cernua*, Thunb. (Oxalid.).

<sup>145</sup> *Galena africana*, L. (*Galena*, incorrect spelling). (Aizoaceae).



“ The month of *September* (1773) was already begun, and the beautiful and flowery spring making its appearance, put me in mind of preparing for a long journey up the country. But here more obstacles and disagreeable circumstances threw themselves in my way than I could ever have imagined. The trifling viaticum I had brought with me from Europe, I had long ago consumed, and in the seventeen months which I had passed here, I had received no supplies from Holland. At Amsterdam, indeed, I had great and powerful patrons in the Burgomasters RYK TEMMINK and VAN DER POLL, together with the Privy councillors VAN DER DEUTZ and TEN HOVEN, by the persuasions and the expence of whom I had undertaken this long voyage ; but to my great misfortune, both of the governors, TULBAGH and RHEEDE VAN OUDSHOORN, to whom I was strongly recommended, and from whom I had reason to expect every support, had departed this life, the one dying previously to my arrival at the Cape, and the other in the voyage thither. I was therefore a stranger, in an unknown place, and left to myself and to my fate till my friends at Amsterdam could be informed of my situation, and endeavour to better it. Misfortunes seldom come single ; and I had now my double portion of affliction for when I intended to take up my salary from the company, it appeared that the ship in which I had arrived was come without its muster-roll. This was therefore first to be brought from Europe, before any one could receive his pay. When the ship sailed from the Texel, the visitation officers in their hurry had forgot to deliver in the muster-roll, and the captain to demand it. The consequence of this was, that none of all those that were engaged on board the ship could, during the space of two or three years, either obtain their pay or leave to go home.

The preceding year I had been obliged to contract debts to a considerable amount, and had now no other resource left than to increase them, especially if I were to be enabled to undertake another expensive journey into the country, and not to remain an idle spectator at the Cape. I therefore again had recourse to M. BERGH, the secretary of the police, who had not only hitherto kindly assisted me with his purse, but also generously opened it to me on this occasion, and thereby enabled me to make another excursion into the interior part of the southernmost point of Africa.”

So we see that in spite of his financial trouble THUNBERG was enabled to undertake a second expedition.

About the European who would be his companion on this journey, and their equipment, THUNBERG writes as follows (p. 316) :

“ For my fellow-traveller I had an English gardener, of the name of MASON, [*sic.*] who had been sent hither by the King of England to collect

all sorts of African plants for the gardens at Kew. Mr. MASON arrived the year before, in the same ship in which Captain Cook, with the Professors FORSTER and SPARRMAN, were to make their celebrated voyage round the world, and towards the southern pole. He had arrived at the Cape after I was set out on my journey to Caffraria; and shortly after this he made an excursion into the country, accompanied by Mr. OLDENBURG,<sup>146</sup> who went with him, partly as his companion and partly as his interpreter. Mr. MASON was well equipped with a large and strong waggon tilted with sail-cloth, which was driven by an European servant, upon whom he could depend. We had each of us a saddle-horse, and for our waggon we had several pair of oxen."

---

TRAVELS, Vol. II (1796). Containing *two expeditions* to the interior part of the country adjacent to *The Cape of Good Hope* and a voyage to *The Island of Java*; performed in the years 1773, 1774, and 1775. The third edition.

The volume is illustrated with 4 plates, inserted at the back of this volume. On plate I we find represented a Kaffir necklace, a Javanese kris and a musical instrument of the Hottentots, the korà; on plate II various Javanese krises; on plate III a Javanese sabre in scabbard, a Hottentot string of differently coloured glass beads to wear about the

<sup>146</sup> About FRANZ PEHR OLDENBURG, a fellow-countryman of THUNBERG, already referred to in the biographical notes on FRANCIS MASSON in the first part of this work (*vide* Journal of S. African Botany, Vol. V, January, 1939, pp. 21-22) we find some notes in JAMES BRITTEN's article "Some early Cape Botanists and Collectors" (Journal of the Linnean Society, Botany, Vol. XLV, 1920-22), which may be quoted here.

In his *Flora Capensis*, 1823, X, THUNBERG describes him as follows: "Oldenburgh, Suecus, a memet incitatus et eruditus, in Campis Urben circumjacentibus comes saepe meus indefessus Anno 1772 fuit, et eodem anno iter cum D. Masson instituens, plantarum copiam collegit. Anno 1774 insulam Madagascar adiit, ubi febri maligna correptus diem obiit supremum." ("In the year 1772 Oldenburgh, a Swede, brisk and cultivated by nature, was often my tireless companion in the country surrounding the town; and in the same year, when undertaking a journey with Mr. MASSON, he collected a great number of plants. In 1774 he went to the Island of Madagascar, where he was stricken by a malignant fever from which he died.") As a matter of fact it was first proposed that the voyage to Madagascar should be undertaken by THUNBERG, who recommended OLDENBURG, "who had been practising botany for the space of two years that he accompanied me in my excursions," to go as Surgeon's mate. THUNBERG writes further, that his recommendation was taken, and "Mr. Oldenburgh even made several collections of plants, but did not live to return from so unwholesome and scorching a climate."

According to a MS. note by ROBERT BROWN in the Banksian Herbarium, OLDENBURG was a private soldier. BANKS acquired about a thousand specimens collected at the Cape by OLDENBURG in 1772; they are numbered, but not named, and were originally mostly on small separate sheets, but are now incorporated in the Herbarium; they are often referred to in the Solander MSS.

LESSING named after him the handsome S. African genus *Oldenburgia* (Compositae).

neck, and on plate IV a Hottentot string of beads, a Hottentot string of glass beads, and a pair of Pinang scissors.

THUNBERG'S SECOND JOURNEY INTO CAFFRARIA (SEPTEMBER 1773-  
JANUARY 1774).

A summary of the route covered by THUNBERG and his party on this journey which they extended as far East as the Sundays River, may be given first.

They set out on their journey on September 11, and directing their course to the north, they first arrived at Jan Biesjes Kraal (Jean Besis Kraal) at a little distance from Capetown. Then they came to Rietvalley. On the right, as they passed along in northerly direction, lay the *Tygerberg* (Tiger mountains) and on the left the *Blaauberg* (Blue Mountains). Having passed by Dassenberg (South of Contreberg) they arrived at the company's post at Groene Kloof. Proceeding on their journey always in a northerly direction, they passed *i.a.* Reebokskop, *Contreberg* (Konterberg), *Baviaansberg* (Baboons Mountain), while the level country presented to their view *Riebeck Kasteel* (Riebeck Kasteel), *Twenty Four Rivers Mountains* (Four and twenty Rivers Mountain) and *Piquetberg*.

Finally they arrived at *Saldanha Bay* (Saldahna B.), from where they pursued their journey to Witteklip (? We could not trace this locality on the map we used) and afterwards went to a farm on the Salt River, a tributary of Great Berg River.

Gradually they penetrated farther up into the country, along and beyond the *Swartberg* (Black Mountain) which is likely to be the Swartberg South of Piquetberg.

After having crossed the Great Berg River and traversed the Kardouw Pass, THUNBERG and his English companion travelled with the wagon some distance down the Olifants River, passing the hot springs, where there was already a bathing establishment. After an accident to the wagon, however, they turned round and proceeded through the long vale, called *Eland's Kloof*, across the mountains to a farm in the *Cold Bokkeveld*, (Coude Bockeveld), which is "situated between the lowermost, or Warm Bokkeveld, and between Olyfant's kloof and Carroveld," as stated by THUNBERG. So they had turned now in a southerly direction. After having traversed a great deal of the *Warm Bokkeveld*, they came to DE WET's farm at *Roode Zand*. Here they stayed for about a week—this time THUNBERG took the opportunity to climb Winterhoek mountain. Proceeding on their journey, they crossed *Brede River*. Then they left

this river to the right, and "the level flat country which here lies about the stream, and is at times inundated by it, is called *Goudena*."

After having crossed *Hex River*, they went to *Swellendam* (Zwellendam). Then directing their course eastwards, they proceeded on their journey to a farm across Gouritz River (Goud's rivier). From there they hastened on to *Mossel Bay* (Muscle bay) to a delightfully situated farm belonging to old Mr. BERNARD.

From Mossel Bay they travelled up towards the mountains (Attaquas and Outeniqua M.) into Hartequas Kloof (now Robinson Pass). Through this kloof they got into a more plain and level country, called Cannaland or Canaan's land, which we did not find marked on the map we used. Then they crossed *Brakke River* (Brack rivier), which derives its source from the Outeniqua M. and unites with Kamanassie River just before Kamanassie Dam, as marked on a modern map. They likewise went across *Matjes River*, a small tributary of Kamanassie River, which also derives its source from the Outeniqua M. They went through Matjes Kloof, where the *Langekloof* begins. "The land in Lange kloof," as THUNBERG informs us, "is bare and without any shrubs or bushes, but abound much in grass."

From Langekloof they proceeded to *Essenbosch* (between Kromme R. and Diep R.). Then they went down to the Kromme River country. They proceeded to *Seekoe River* (Zeeko-rivier) and afterwards crossed *Gamtoos River*, "which at this time formed the boundaries of the colony, and which was not suffered to extend farther. This was strictly prohibited in order that the colonists might not be induced to wage war with the courageous and intrepid Caffres."

In the meantime they had reached the woody country of what later became the Port Elizabeth division. THUNBERG went out to see whether the trees of the woods, of which this part of the country consisted, had yet any blossoms upon them. The morning following (December 18) they pursued their journey to the great *Sundays River*. Then they set out on their journey back to the Cape, not by the same way by which they had come, but by the upper road to *Van Staadens River* (van Stade's rivier), a small coastal river emptying into St. Francis Bay, and from there to Seekoe River.

In the Christmas holidays they proceeded on their journey up towards Kromme River and Langekloof. Then they rode turning to the right over the mountains to a farm near Riet-valley in *Kamanassie Land*, a tract of country that lay before the Kamanassie Mountains.

THUNBERG now made up his mind to take a view of the Great Karoo at the other side of the Swartberg Range north of the Kamanassie Mountains. "In order to have a view of the country on the other side of the



mountains, I climbed up to their highest summits, and saw, at no great distance, a ridge of mountains, which was lower than this that I stood on, and, between these, the country was as broad as Lange kloof, and consisted of hills and vallies. The tract of country that lay behind the lower ridge was flat and poor Carrow-land, and so long and broad, without any mountains, that the eye could not reach its boundaries," as we find recorded on p. 100.

The drivers and the Hottentots were ordered to go on with the carts through Hartequas (?) Kloof and wait at Riet-valley, while THUNBERG and MASSON made a tour on horseback over the dry Karoo, and afterwards proceeded through Platte Kloof. But here they lost their way in the Karoo, had to sleep in the open veld, near a large fire of Canna-bushes (*Salsola aphylla*).<sup>147</sup> In the morning they found their horses disappeared, but fortunately they discovered them behind some heights. Finally they reached the house of a farmer, where they passed the night. Afterwards they made their way to Hartequas (?) Kloof, where they met with their people and carts. From there they proceeded on their journey to *Gouritz River*, and afterwards they arrived at Riet-Valley near *Groot-vadersbosch*.

Later on they passed through *Swellendam* and from there they directed their course to the Cape, where they arrived safe and sound at the end of January, 1774, after having crossed some smaller streams (*i.a.* Palmiet and Steenbrasemey R.) and the *Hottentots Holland Mountains*.

#### I. Botanical notes on the Cold Bokkeveld, Winterhoek and Roode Zand

In the second half of October, 1773, they had reached the Cold Bokkeveld. From the vegetation of this area two species are quoted. On p. 24 THUNBERG narrates: "Near the mountains are sometimes seen a few low and scattered trees of the *Protea grandiflora* species (*Waageboom*)."<sup>148</sup> And on pp. 26-27 one of the most interesting insectivorous plants, endemic at the Cape, is brought to our notice: "Among the few shrubs that grew in the mountains, I found here that curious shrub the flybush (*Roridula dentata*),<sup>149</sup> the leaves of which are covered with fine hairs, and a tough glutinous substance to which smaller insects adhere. It is placed in the houses for the purpose of catching flies."

<sup>147</sup> Canna- or Ganna-bush, *Salsola aphylla*, L. (Chenopodiaceae).

<sup>148</sup> *Protea grandiflora*, Thunb., the Wagenboom or Waa'boom.

<sup>149</sup> *Roridula dentata*, L. (Droseraceae).

After having traversed the Warm Bokkeveld for the greater part, they got to Roode Zand by way of Mostertshoek.

As we have already recorded, THUNBERG made an excursion to Winterhoek Mountain. We may quote here from p. 32, that in the mountains at Winterhoek which THUNBERG examined more carefully than in the previous year, he found the flybush growing in abundance, . . . and the scarce plant, called *Protea nana*,<sup>150</sup> the flower of which resembles the dog rose, was found only in this place." A little farther he writes that among other rare plants he found here was the *Disa coerulea*.<sup>151</sup>

Among the botanical features of Roode Zand valley a single species is mentioned (p. 34), viz. : "The *Ixia bulbifera*,<sup>152</sup> a bulbous plant with a red flower, grew here in the greatest abundance. When one approached the place where it grew, it seemed to be but thinly scattered over the field, but, at a distance, the ground appeared as if it were covered with scarlet cloth."

From Roode Zand they rode in south-eastern direction and crossed Hex River. As to the character of the country they passed along, Thunberg informs us (p. 35) that "it was of the Carrow kind." Further he writes that the sheep were said to feed here on the *Mesembryanthemums* (*vygebosches*), which were supposed to render the dung of these animals unfit for manure ! (p. 36).

## II. Botanical notes on the country near Langekloof, Kromme River and Seekoe River.

On p. 60 we find recorded that on November 30 THUNBERG and his party proceeded to Essenbosch, "a pretty little neat wood which has acquired its name from the large trees *Essenboom* (or *Ash Trees*, *Ekebergia capensis*)<sup>153</sup> that grew here ; the leaf of which greatly resembles that of the European ash (*Fraxinus*). Large fig-trees too (*Ficus capensis*), the fruit of which is eaten by the baboons, grew here in abundance."

On December 1 they went down the Kromme River country, "which takes its name from *Kromme rivier* (the *crooked river*) that runs meandering through it," as THUNBERG informs us. Moreover, he writes (p. 61) that Kromme River valley is a mere continuation of Langekloof.

<sup>150</sup> *Protea nana* (Berg.) Thunb. = *P. rosacea*, L., the mountain-rose or skaam blom.

<sup>151</sup> *Disa coerulea* (?). We failed to trace this name. The species THUNBERG found at Winterhoek might have been *Disa graminifolia*, Ker. ; syn. *Herschelia coelestis*, Lindl., the beautiful blue *Disa*.

<sup>152</sup> *Ixia bulbifera*, L. = *Sparaxis bulbifera*, (L.) Ker.

<sup>153</sup> *Ekebergia capensis*, Sparrm. This African tree and the European Ash are no kindred species, the former belonging to the Meliaceae, the latter to the Oleaceae.

Later on they proceeded to Seekoe River, and, as in the previous year, special attention was paid to the "Bread-tree," *Encephalartos caffer*, Miq., formerly known under the name of *Zamia caffra*, and the information THUNBERG gives about this Cycad on pp. 66-67 of this volume, forms a most interesting addition to his records in vol. I (p. 201), viz.: "As the species of palm called the bread-tree (*Zamia caffra*) was found in these parts, we looked for the fruit, which is very scarce, and gathered the seeds. Certain trees produce only male flowers, in a large cone without seeds, and other trees again yield a similar cone, as large as a man's head, with genuine seeds. To the under part of the scales of the male cone are fixed an infinite number of antherae, which burst, and contain a white toughish pollen. On the female cone, seeds, as large as Jordan almonds with the shells on, are contained between the scales, surrounded with a reddish pulp, which is good to eat. The fruit sprang out of the very top of the palm, frequently before there was time for the stem to be formed above the surface of the earth. The seed was supposed to come up best after being planted out, if it was covered with straw, which was to be set on fire, and burnt down close to the ground; or if the seed was previously steeped in warm water."

About December 15 they proceeded as far as the (later) Port Elizabeth division. On p. 89 THUNBERG narrates that "in the plains there were striped horses and asses (*Equus Zebra* and *Quagga*), hartebeests (*Capra dorcas*),<sup>154</sup> koedoes<sup>155</sup> (*Capra strepsiceros*), &c." Among these animals the Quagga, *Equus quagga*, has been exterminated since the days of Thunberg.

### III. Return from Caffraria.

They set out on their journey back to Capetown, as already recorded, at the end of December, 1773.

From p. 96 following information may be quoted here: "In the environs of VAN STADE'S river, were the finest woods I had seen in the whole country. Few of the trees, however, were as yet in bloom. The assagay tree (*Curtisia faginea*),<sup>156</sup> of which the Hottentots and Caffres make the shafts of their javelins, grew here in abundance, and began now to develope its diminutive blossoms." We may observe that Van Staaden's River runs through the country of the later Uitenhage division.

<sup>154</sup> Very likely the Cape Hartebeest, whose scientific name was later altered to *Bubalis caama*.

<sup>155</sup> The present scientific name of the Kudu (Dutch, Koedoe) is *Strepsiceros kudu*.

<sup>156</sup> *Curtisia faginea*, Ait. (Cornaceae).

On next page THUNBERG narrates that they rode over the mountains to a farm near Riet-valley in Kamanassie Land. Of the plants growing in this area two species, of the same genus, are brought to our notice (p. 97): "The Hottentots called by the name of *Nenta*, a plant (*Zygophyllum herbaceum repens*),<sup>157</sup> which was said to be poisonous to sheep, as also another, a shrub of the same genus (*Zygophyllum sessilifolium*)."<sup>158</sup>

As we have already recorded in our description of the route they followed, THUNBERG and MASSON crossed the mountains in order to have a look at the Great or Central Karoo. On p. 98 we read with regard to this: "The broad tract over which we travelled was Carrow field all over, exhibiting a few bushes, no grass and very little water."

Of the Karoo vegetation only one plant, a succulent, is specially mentioned, viz.:

"*Kon* was a name given by the Hottentots to a shrub that grew here (*Mesembryanthemum emarcidum*)<sup>159</sup> and was famous all over the country. The Hottentots come far and near to fetch this shrub with the root, leaves, and all, which they beat together, and afterwards twist them up like pig-tail tobacco; after which they let the mass ferment, and keep it by them for chewing, especially when they are thirsty. If it be chewed immediately after the fermentation, it intoxicates. . . . The colonists call it *Canna-root*. It is found in the driest fields only. . . ."

They pursued their journey in a western direction and finally arrived at Riet Valley, a company's post in the vicinity of Grootvadersbosch, where they remained a few days to rest themselves, as THUNBERG narrates, "and particularly for the sake of paying another visit to Groote Vader's bosch (or *Grandfather's-wood*) and seeing if the different kinds of trees were come into blossom."

However, THUNBERG was but little more fortunate than the previous times he visited this forest, for he writes (p. 109):

"On the 14th of January accordingly, we went thither, but were not more successful now than we had been before with respect to finding the trees in blossom, much less with fruit on them; some of them, however, were on the point of budding."

From pp. 109-112 a summary is given of the uses of the different sorts of trees "that grew in and round about the wood."

We may confine ourselves to quoting here the various sorts of woods without the particulars THUNBERG gives about their use (cabinetmaking, building, etc.).

<sup>157</sup> *Zygophyllum herbaceum repens* (?). We failed to trace this name.

<sup>158</sup> *Zygophyllum sessilifolium*, L. (Zygophyllaceae).

<sup>159</sup> *Mesembryanthemum emarcidum*, Thunb. = *Mesembr. anatomicum*, Haw.



Black iron wood (*Zwarte yzerhout*, *Olea laurifolia*).<sup>160</sup>

Yellow wood (*Geelhout*, *Ilex crocea*).<sup>161</sup>

Camassie wood (*Camassie-hout*).<sup>162</sup>

Red pear-tree (*Roode peer*).<sup>163</sup>

The Bucku-tree, *Bucku-hout* (*Olea Capensis*).<sup>164</sup>

The Red alder (*Roode Else*, *Cunonia capensis*).<sup>165</sup>

The Ash (*Essenhout*, *Essenboom*, *Houtniquas* *Essen*, *Ekebergia capensis*)<sup>166</sup> is a large tree.

Of the *Stinkhout*<sup>167</sup> there are two sorts, the white and the brown.

The brown is very beautiful.

The wood of the Olive tree (*Olyve hout*, *Olea Europaea*).<sup>168</sup>

Wild Catjeping (*Gardenia Thunbergia*).<sup>169</sup>

*Witte Essen* (or white ash).<sup>170</sup>

*Zwart-bast* (*Royena villosa*).<sup>171</sup>

*Keurhout* (*Sophora capensis*).<sup>172</sup>

The Almond tree (*Amandelhout*).<sup>173</sup>

The *Assagay tree* (*Assagay boom*, *Curtisia faginea*).<sup>174</sup>

*Dorn-hout* (*Mimosa nilotica*).<sup>175</sup>

<sup>160</sup> Black Ironwood, *Olea laurifolia*, Larn. (Oleaceae.)

<sup>161</sup> Thunberg's Yellow wood, *Ilex crocea*, Thunb. = *Elaeodendron croceum*, DC. (Celastraceae) is the "Saffraanhout" (vide footnote 88).

<sup>162</sup> Camassie-wood = *Gonioma Kamassi*, E. Mey (Apocynaceae).

<sup>163</sup> Red pear-tree = *Scolopia Mundii*, Warb. (Bixaceae).

<sup>164</sup> The Buchu Tree = *Olea capensis*, L. (Oleaceae).

<sup>165</sup> The Red Alder = *Cunonia capensis*, L. (Saxifragaceae).

<sup>166</sup> The Ash or Essenboom, *Ekebergia capensis*, Sparrm. (Meliaceae).

<sup>167</sup> Stinkhout (brown), *Ocotea bullata*, E. Mey. (Lauraceae).

<sup>168</sup> The Cape Olive Tree, *Olea europaea*, Thunb. (non L.!) = *Olea verrucosa*, Link.

<sup>169</sup> *Gardenia Thunbergia*, Thunb. (Rubiaceae).

<sup>170</sup> The White Ash. Not identified.

<sup>171</sup> *Royena villosa*, L. (Ebenaceae).

<sup>172</sup> *Sophora capensis*, L. = *Virgilia capensis*, (L.) Lam. (Leguminosae).

<sup>173</sup> The Almond Tree or Amandelhout. We do not know what tree is meant here. Besides, there is some reason to believe that this tree and the tree which is known to-day under the name of Wild Almond, *Brabejum stellatifolium*, L., are distinct plants. In "Travels" no other common name than "Wild Chestnuts" or "Wilde Castanien" has been applied to the Brabejum, the name Wild Almond being of later date.

<sup>174</sup> *Curtisia faginea*, Ait. (Cornaceae).

<sup>175</sup> *Mimosa nilotica*, Thunb. = *Acacia Karoo*, Hayne.

The Waageboom (*Protea grandiflora*)<sup>176</sup> for fuel and making charcoal.

The Kreupelboom (*Protea speciosa*).<sup>177</sup>

The Leepelboom.<sup>178</sup>

On p. 112 Thunberg informs us, that the largest trees in the African woods, as well in Grootvadersbosch as in other forests, are the following :

“ the Geelhout (*Ilex crocea*), the Bucku (*Olea capensis*), the Tarchonanthus camphoratus, and arboreus,<sup>179</sup> the Roode-else (*Cunonia capensis*) and the Wite-Else. the Stinkhout, the Assagayhout (*Curtisia*), the wild Chesnut (*wilde Castanien*, *brabejum stellatum*),<sup>180</sup> the wild Fig tree (*wilde Vygeboom*, *Ficus capensis*),<sup>181</sup> the Keureboom (*Sophora capensis*), the Mimosa nilotica and the Esse-boom (*Ekebergia capensis*).”

On the hills near Grootvadersbosch THUNBERG observed a wealth of flowering *Ornithogalums*, of which he writes : “ On the hills grew the *Ornithogalum altissimum*,<sup>182</sup> which was now in full blossom, and decorated the plain with its long and crowded spikes of flowers. It was said to be very common every fourth year, and, in the intervening years, hardly to be seen.”

On January 26 they arrived at Hottentots Holland Mountains on which they found several farms. They went down the mountains over its steep slopes, and after having traversed the Flats on the other side, they arrived at Cape Town.

#### THE CAPE, 1774.

Having returned to Capetown from his second journey into Caffraria, which had lasted  $4\frac{1}{2}$  months, he had to acquit himself of the task to send to his patrons in Europe collections of plants and other objects of natural history, made on his journeys into Caffraria and during his sojourn at the Cape, for he writes on p. 117 :

“ Being arrived in town so late in the year [? M.K.,] after a journey of five months, I was obliged to use dispatch, in order that I might be able to embrace the opportunity of sending, in the beginning of this year,

<sup>176</sup> *Protea grandiflora*, Thunb.

<sup>177</sup> *Protea speciosa*, L.

<sup>178</sup> The Leepelboom = *Hartogia capensis*, Thunb. (Celastraceae).

<sup>179</sup> *Tarchonanthus camphoratus*, L. ; *Tarchonanthus arboreus*, ? = *Brachylaena* sp. (Compositae).

<sup>180</sup> *Brabejum stellatum*, Thunb. = *B. stellatifolium*, L. (Wild Almond !).

<sup>181</sup> *Ficus capensis*, Thunb. (Moraceae).

<sup>182</sup> *Ornithogalum altissimum*, L.f. = *Urginea altissima*, (L.f.) Baker.

1774, to the Botanic Gardens of Amsterdam, Leyden, and Leeuwarden, by the homeward-bound ships sailing for Europe, a considerable quantity of bulbous roots, herbs, seeds and growing plants ; and also, to my other patrons, a great number of bulbous roots, seeds, insects, stuffed birds, and other scarce animals."

Then we come across some varied notes on the Cape of which following may be quoted here :

On p. 119 THUNBERG writes : " Besides a handsome house, built in the Company's garden in town, the governor has also one at *Rondebosch*, and another at *Nieuwland*, both out of the town, to which he may retire at pleasure, and unbend his mind when oppressed with the cares of state. Another such house was now to be built likewise for his accommodations at Baay-fals.

The Company has very fine gardens both at *Rondebosch* and *Nieuwland*, from whence the ships and the hospital are supplied with vegetables."

It may be observed that the governor's house at *Rondebosch* was not the Groote Schuur estate, which is of later date.

On the next page we find recorded that the ships that arrived at the Cape brought the news that Baron VAN PLETTERBERG had been nominated Governor of the Cape and the Colony, and had been shortly after installed in his office.

From the following quotation (p. 128) it is learned that some alterations made in the Company's garden in 1774, by order of Governor TULBAGH's successor, Baron VAN PLETTERBERG, by no means met with THUNBERG's approval.

" In the Company's garden there was a very beautiful covered walk, formed of chestnut-trees, which were now very thick and large. It was this year cut down root and branch by order of the governor, for the purpose of making different kinds of furniture of its elegant wood ; and in its stead were planted oaks, which, however, are as little likely to restore the beauty of the garden as those curious animals are to return thither, which the highly respectable Governor Tulbagh had taken pains to collect together there, from the interior parts of Africa ; but which, after his death, were turned out by his successor to become a prey to ravenous beasts."

On the same page THUNBERG calls attention to the wonderful hygroscopic character of a capsule of *Mesembryanthemum*, viz. :

" The fruit of a species of *Mesembryanthemum* was sometimes brought to town as a rarity, and was called *Rosa de Jericho*.<sup>183</sup> When it is put in

<sup>183</sup> It is doubtful from which species of *Mesembryanthemum* the capsules, called by the colonists, " Rose of Jericho," originated. We could find no information on the subject.

water, it gradually opens all its seed-vessels, and exactly resembles a sun; and when it becomes dry again, it contracts itself and closes by degrees."

THUNBERG'S JOURNEY TO ROGGEVELD (SEPTEMBER, 1774—DECEMBER, 1774).

On this journey, which lasted exactly three months, quite another corner of the country was visited. This time THUNBERG penetrated as far northwards as the Bokkeveld Mountains between 31 and 32 degrees southern latitude.

On this last expedition THUNBERG was again accompanied by FRANCIS MASSON.

In his report of the journey to Roggeveld only a small number of botanical records are to be found.

Before proceeding to the botanical part, a description of the route THUNBERG and his party followed on this third and last journey far into the interior of the Colony may be of interest.

They left the Cape on September 29, 1774, and first they directed their course to the north-east.

After having crossed Salt River (Zout rivier) near Capetown, and *Mosselbank River* (a branch of Diep River), they arrived at Visschershoek. Then they proceeded to a farm near *Paarl Berg*. From there they travelled in northern direction and arrived near *Riebeek Kasteel* on October 8. Although described by THUNBERG as a very high mountain with steep sides, we read that they managed to climb up to its high summits!

Proceeding on their journey they came to *Piquetberg* (Picket-berg), a mountain still higher than Riebeek Kasteel, as specially stated by THUNBERG.

Travelling always in northern direction, they finally arrived near *Verloren Vlei* (Ferlooren-valley), a rivulet which rises from Piquetberg and empties into Elands Bay. From Verloren Vlei they got to *Langvlei River* (Lange valley), described by THUNBERG as "a river similar to the former, but much less." We may add to this that Langvlei R. rises from the Olifants River Mountains.

Directing their course to the north-east, they arrived at a farm near *Olifants River*. After having crossed this river, they reached the *Bokkeveld Mountains* which ended at that side (not far from the sea-shore according to THUNBERG). On p. 151 THUNBERG narrates that they rode down by the foot of the mountains, "the first and largest projecting point of which was called *Windhoek*, and the other *Maskamma*."



They passed the *Matsikamma* (Maskamma) Mt. and got into the desert, viz., the *Bokkeveld Karoo*. About the tract of land in which they were travelling now, THUNBERG writes on p. 152: "On the 31st (of October) we proceeded through the desert; in which the farther we advanced, the drier it grew. Our journey through the desert lasted three days at least: In the 3rd evening we reached the *Bokke-land mountains*, where we baited all night near a small rivulet of fresh water, called *Dornrivier*." It may be remarked that this small semi-permanent river is not the great Doorn River which rises from the Cold Bokkeveld and unites with Olifants River.

On p. 153 THUNBERG states that all mountains in this district stretched N.N.E. towards the sea, and S.S.W. into the country.

Later on they rode up the Bokkeveld Mountains with two pair of oxen.

About the country they had reached now, we read on p. 155: "We now left a tract of land to the left, nearer to the sea, which is occupied and inhabited by two rich and powerful nations, the little and great *Namaquas*. . . .

. . . . *Bokke-land* or *Goat-land*, which we had now reached, is nothing else than a tolerably high mountain, which is level at the top, and towards the edges of its summit forms a variety of projecting angles, pointing to the sea side. It consists of different strata; the uppermost of which is sand-stone, in many places interlarded with polished round pebbles. The sand-stone is for the most part laminate like slate, and moulders away into pieces by rain."

It appears from the above informations that THUNBERG has passed along the southernmost corner of Namaqualand.

From Bokkeland they saw the *Roggeveld Mountain* to the eastward and, nearer by, the *Hantam Berg* (Hantums mountains) to the northward. Then they rode along Bokkeland to *Hantam*, and about the tract of land they had reached now and in which they penetrated, THUNBERG writes on pp. 163-164: "The Hantum country began with scattered ridges of mountains; farther up the country stood a high mountain, which was more particularly called *Hantummountain*, and had a cut, or open cleft, through which we rode. The mountain was smooth and level at the top, and in height appeared equal to Roggeveld."

Further, we are informed, that after they had got to the end of Bokkeland, the country grew, the farther they travelled, more and more arid ("grew a drier Carrow"). They came across considerable rivers which had still brackish water in them, but in summer are quite dried up.

Directing their course to the south-east, they came after having travelled along the foot of Roggeveld Mountains, to the *Louermost Roggeveld*, which is so called "not because it lies lower than the other

Roggevelds (*Ryefields*), but because it lies farthest from the Cape." (p. 168).

About the climate of this district we read : " The winter is very cold, with frost and snow, for which reason no cattle can be kept here, instead of which they are driven down to the Carrow."

From the Lowermost Roggeveld they proceeded to the *Middle Roggeveld*, which was only divided from the former by means of a few mountainous ridges.

Then they rode along *Visch River* to a farm of a certain JACOBUS THERON, and afterwards they went down into the Bokkeveld Karoo, on which drive the difference of climate sharply manifested itself, for he writes : " While we were on the heights of the mountain, it was intensely cold, but the lower we descended, the calmer and warmer the air became, till in about three hours time we got down to Carrow, when the heat began to grow intolerable." (p. 178.)

They traversed the "dry and barren Carrow" in a south-westerly direction and came to Goudbloem's Kloof, and through some other smaller valleys to the "river of Misfortune (*Ongelucks rivier*)."  
Goudbloem's Kloof we failed to find on the topographical map and therefore we did not mark it on the map we have made of the part of South Africa visited by THUNBERG, which one will find reproduced herewith. (Possibly it is the present farm Bloemfontein through which passes the road from Sutherland via Verlaten Kloof to Karoo Poort.)

They crossed *Ongeluks River* (which rises from the Bokkeveld Karoo and unites with Doorn R.).

On December 8 they passed Paardeberg in their way to *Doorn River* (a tributary of Olifants R. and rising from the Cold Bokkeveld).

Then they crossed Doorn River and through a valley (perhaps Karoo Poort) formed by the mountains between Karoo and Cold Bokkeveld they first arrived at a settlement and farm and proceeding on their journey they finally arrived at Verkeerde Valley (at the eastern foot of the Matroosberg).

A few days later they passed through a valley in the mountains to de Vos's estate near *Hex River*. Those mountains are not named, but they are likely to be the Hex River Mts.

On December 17 they reached *Roode Zand*, through Hex River's Kloof.

From Roode Zand they took the usual way through its kloof, which has, as THUNBERG states on p. 183, a considerable eminence that must be crossed. However, the rest of the road runs along the side of the mountain.

About Roode Zand we read that this valley is to be considered as " the

key to the whole country behind the chain of mountains, which runs across the whole point."

Then they took their route past Paardekraal through Koopman's River (a rivulet which is a branch of Great Berg River), and after having crossed Berg River, they proceeded to the Cape.

*Some botanical notes about the journey to Roggeveld.*

*Near Piquetberg :*

On p. 139 THUNBERG writes, *i.a.* : " Here grew a shrub called Zand-olyve (*Dodonaea angustifolia*),<sup>184</sup> the wood of which was of a hard nature."

On next page we read that " the *Stapelia incarnata*,<sup>185</sup> a very branchy plant without leaves, was found in the vicinity of the mountain, though it was very scarce.

In the same place we find a note about wild animals abounding in this district, viz., that " tygers infested the bushes in these plains." THUNBERG adds to this that the " Cape tyger " is a small animal of about the size of a dog.

Tigers being not represented in this part of the world, the catlike animals THUNBERG referred to, are likely to have been leopards !

*Vicinity of Langvlei River :*

P. 146. In their way to the Heerenlogement (translated by THUNBERG as " Gentlemen's hotel "), a mountain north of Langvlei and not far from the confluence of Olifants River and Doorn River, THUNBERG found a rare plant for which he had sought for a long time, viz., the *Codon Royeni*,<sup>186</sup> but he did not see more than one single shrub of it.

*Bokkeveld Karoo :*

On p. 153 THUNBERG writes about this district : " In the Carrow-land grew the most singular Mesembryanthemums, and those in the greatest quantity ; on the other hand but very few Crassulas, Euphorbias and Cotyledons."

*Bokkeveld Mountain.*

P. 154. When climbing this mountain, THUNBERG discovered a species of *Aloe*, later named by LINNAEUS fil. *A. dichotoma*. THUNBERG

<sup>184</sup> *Dodonaea angustifolia*, Thunb. = *D. Thunbergiana*, Eckl. et Zeyh. (Sapindaceae).

<sup>185</sup> *Stapelia incarnata*, L.f. = *Caralluma incarnata*, (L.f.) N.E. Br. (Asclepiad).

<sup>186</sup> *Codon Royeni*, L. (Hydrophyllaceae).

does not give a description of this quaint Aloe-tree, which is known under the common name of "Kokerboom," but he confines himself to a short note about its stem, which, when it has reached a proper thickness, is hollowed out and used by the Hottentots as a quiver for their arrows.

*Lower Bokkeveld.*

P. 163. Here they found among other things the very poisonous *Buphane disticha* (L.f.), Herb., a plant of the family of Amaryllidaceae, characterized by an enormous bulb. THUNBERG writes about it as follows: "Poisonous bulbous plants (*Gifbolles*, *Amaryllis disticha*) grow in several places common, with their beautiful clusters of flowers. The root, which is poisonous,<sup>187</sup> is almost as big as one's fist. The Hottentots use it chiefly for poisoning the arrows with which they shoot the smaller kind of game. . . .

. . . . Those bulbs that grow in the shade are thought to possess a stronger poison than those which are exposed to the sun."

*Near Hantam Berg.*

P. 164. In the vicinity of this mountain THUNBERG made a search for and was so successful to find one of the most curious representatives of the South-African vegetation, viz., the *Hydnora africana*, originally described by him as a kind of fungus (in an article entitled "Beskrifning på en ganska besynnerlig och obekant svamp, *Hydnora africana*, ifrån Goda Hoppets udde i Africa insänd." (Kongl. Vetenskaps Academiens Handlingar, Stockholm, vol. 36, Tab. II. 1775 ("Description of a most peculiar and unknown fungus, *Hydnora africana*, introduced from the Cape of Good Hope in Africa.")).

*Hydnora africana*, Thunb. is a phanerogamous plant on which the family Hydnoraceae has been founded. It is a root-parasite growing on various species of *Euphorbia*, i.a. on *E. mauritanica*, L. Its fruit, of the size of an egg, ripens underground, and its contents are eaten by the Hottentots and various animals, i.a. jackals, hence the name "Jakhalskost."

About this remarkable plant and its occurrence THUNBERG narrates on p. 164: "In this tract we found the Fungus we had so long sought and wished to see, (*Hydnora Africana*) which without doubt is one of the most extraordinary plants that have been discovered of late years. It always grows under the branches of the shrub, *Euphorbia tirucalli*,<sup>188</sup>

<sup>187</sup> THUNBERG must have seen rather small specimens, for the bulbs can grow into the size of a man's head!

<sup>188</sup> This is not *Euphorbia tirucalli*, but probably *E. mauritanica*, L.



and upon its roots. The lower part of it, which is the fruit, is eaten by the Hottentots, Viverræ, Foxes and other animals."

### *Roggeveld Mountains.*

At the end of November they had arrived near the Roggeveld Mts. Of the plants growing wild in this part of the country three species are brought to our notice, viz. :

... "Wild cucumbers is the name given to the Coloquintida (*Cucumis colocynthis*).<sup>189</sup> They were said to be eaten by the Hottentots, and even by the colonists, after being pickled with vinegar, although they taste very bitter. The sheep feed eagerly on them. The *Stapelia articulata repens*,<sup>190</sup> a thick plant without leaves, is eaten by the Hottentots, as also by the colonists, after being pickled in the same manner as cucumbers.

Karré-hout (*Rhus*)<sup>191</sup> is a kind of wood which the Hottentots in this part of the country used for making bows." (p. 171.)

At the end of his report of his journey to Roggeveld, THUNBERG writes as follows (p. 184) :

"We took our route to . . . the Cape, where I arrived safe and sound on the 29th of December, with a heart filled with the deepest adoration of that divine Being, which, during my three years' travels in this country, had not only preserved my life and health, but also permitted me to make several useful discoveries in it, to his glory and the future benefit of mankind."

### THE CAPE, 1775.

In this part of his itinerary THUNBERG has recorded some recollections of his journeys into the interior of the country. Among other things he gives a most interesting picture of the Karoo, which we may quote here in full :

"Beautiful as the country is to the eastward, fertile, abounding in grass, and well peopled, it is equally dry, barren, uncultivated, and uninhabited to the northward of the Cape, and the farther you proceed the more barren and desertlike it grows.

<sup>189</sup> *Cucumis colocynthis*, Thunb. = *Citrullus vulgaris*, Schrad. (Cucurbit.).

<sup>190</sup> *Stapelia articulata repens* = *Stapelia articulata*, Ait. = *Pectinaria articulata*, Haw. (Asclep.).

<sup>191</sup> Karré-hout, *Rhus viminalis*.

After passing three or four ridges of mountains to the northward, you arrive at a country something higher than the Cape shore, but lower than the vallies which lie between the ridges of mountains you have just left behind. This land is called Carrow, or Carrow-field. It seems to go like a broad belt over the whole of this angle of Africa, from the sea-side at the north-western end to the ocean on the south-eastern side. I do not suppose the breadth to be alike all over ; but in some places it requires six whole days (or rather long nights) journies. The sun is quite scorching here in the day-time, and the nights are rather cold. The great want of water here for the space of eight months, during which time not a drop of rain falls, together with the aridity of the soil, is the cause that this desert produces nothing but a few herbs and bushes with thick fleshy leaves, such as *Crassulas*, *Mesembryanthemum*, *Cotyledons*, *Cacalias*, *Stapelias* ; and that neither man nor beast can live there in summer, as also that no grass can grow, nor any useful grain be cultivated. The soil consists of clay impregnated with iron ochre and a great quantity of sea-salt.

During the time I spent in travelling through different parts of this desert, I did not see a single sparrow, much less any quadruped there, excepting rats in holes in the earth, which probably can subsist a long time without water, and quench their thirst with the succulent and saltish leaves produced by the bushes.

After crossing this extensive and dry desert, which to the eye appears very nearly level, or at most rising a little and slowly to the northward, you encounter a very high mountain, the top of which it would take almost a whole day's journey to reach. This Roggeveld mountain has very little earth on it, exhibiting in most places the smooth and naked rock ; neither does it slope off like other mountains, but it is for the most part level, and extends in this manner so far to the northward that the end of it is not known to the colonists. The climate at this height, although several degrees nearer than the Cape to the sun and the Equator, is not only cold, but the cold is so intense that the ground in winter is for a long time covered with snow, hail, and ice."

So far his vivid description of the South African Karoo, a semi-desert which might be turned into fertile land if there were water. . . .

On p. 206 THUNBERG writes that according to his usual practice in the preceding years, he had made it his first care, as soon as he had arrived in Cape Town, to send to Europe, by the returning ships, the collections he had made during his last tour.

Finally it may be mentioned here that THUNBERG found the sides of the streets in the town planted with great numbers of European oaks (*Quercus Robur*), which served both to adorn and shade the houses.

TRAVELS, Vol. IV (1796). Containing *Travels* in the Empire of *Japan* and in the islands of *Java* and *Ceylon*, together with *The Voyage home*. The third edition.

This volume is illustrated with 4 plates inserted at the back, representing implements and musical instruments of the Japanese.

#### CAPE OF GOOD HOPE, 1778.

On his homeward voyage from the far East, the ship made the usual stop at the Cape. As to his experiences in the short time of his second and last visit to this corner of the world, recorded on pp. 270-272, the following may be quoted here as the most important :

"A Swedish vessel, which lay at anchor in the road, procured me the pleasure to embrace at this place several of my dear friends, who had come from my beloved native country, and among other novelties, had brought me letters, together with the agreeable news, that I had been appointed Demonstrator of Botany in the University of Upsal, under Professor Linné, who had succeeded his invaluable father."<sup>192</sup>

"I met here with a Mr. PATTERSON,<sup>193</sup> an Englishman who was come to this place, in order to collect from the interior of Africa, and transmit home to his own country, both the seeds and live roots of such plants, as were scarce and peculiar to these parts. He professed to travel at the expence of certain individuals, and possessed some small knowledge of Botany, but was, in fact, a mere Gardener."

On May 15, 1778, he once more left the Cape in order to sail to Europe. The ship arrived in the roads of *Texel* on October 1, 1778.

As we already know from his letter of October 3, Prof. N. L. BURMAN gave him a most cordial welcome and invited him to take his residence in his house and pass the winter in the midst of his family.

On p. 283 THUNBERG, who greatly appreciated Professor BURMAN's kindness, writes as follows :

"I sailed in company with some of the other officers in a hired boat (from the *Texel*), and arrived in safety at Amsterdam, where my much-respected Patron, Professor BURMANNUS, with the utmost kindness and benevolence, made me an offer of his house and table."<sup>194</sup>

<sup>192</sup> Vide P. J. BERGIUS' letter of December 5, 1777. (Carl Peter Thunberg II. Journ. of S. Afr. Botany, Vol. V, Part III, July, 1939, p. 98.)

<sup>193</sup> Vide first part of this work, footnote 5 (Journal of S. Afr. Botany, Vol. V, Part I, January, 1939, p. 8).

<sup>194</sup> Vide Carl Peter Thunberg I, Journal of S. Afr. Botany, Vol. V, Part I, January, 1939, pp. 6-7.